CAREER GUIDE

VAULT CAREER GUIDE TO

INVESTMENT MANAGEMENT

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Introduction

Do you enjoy following the financial markets—whether it be reading *The Wall Street Journal*, watching CNBC, or checking stock prices on the Internet? Do you consider yourself to be creative and analytical, opinionated and objective? If that is the case, you may find a career in investment management an appealing option.

Imagine an industry that rewards individuals for working independently, thinking on their feet and taking calculated risks. Additionally, how many industries can you think of that broadly impact households all over the world? Very few. That is one of the many exciting aspects of the asset management industry—with household increasing and the demise of Social Security as a tool for long-term savings, more people than ever before are planning for their future financial needs. As a result, the industry is growing and more visible than ever.

The asset management community seeks to preserve and grow capital, and generate income for individuals and institutional investors alike. The *Vault Career Guide to Investment Management* will serve as an insider's guide for careers in the industry. It will provide you with the knowledge to appropriately target your career search and a framework to handle the most challenging interviews. It will also break down the many different career positions that are available to both undergraduate and graduate students.

Investment Management vs. Asset Management

A quick note about the terms investment management and asset management: these terms are often used interchangeably. They refer to the same practice—the professional management of assets through investment. Investment management is used a bit more often when referring to the activity or career (i.e., "I'm an investment manager" or "That firm is gaining a lot of business in investment management"), whereas "asset management" is use`d more with reference to the industry itself (i.e., "The asset management industry").

More stability

Because of the stability of cash flows generated by the industry, investment management provides a relatively stable career when compared to some other financial services positions (most notably investment banking). Investment management firms are generally paid a set fee as a percentage of assets under management. (The fee structure varies, and sometimes is both an asset-based fee plus a performance fee, especially for institutional investors.) Still, even when investment management fees involve a performance incentive, the business is much less cyclical than cousins like investment banking. Banking fees depend on transactions. When banking activities such as IPOs and M&A transactions dry up, so do fees for investment banks, which translates into layoffs of bankers. This occurred in 2000-2001, with the tech bubble burst, and most recently in late 2007, with the subprime mortgage debacle. In contrast, assets are quite simply always being invested.

History

To better understand why asset management has become such a critical component of the broader financial services industry, we must first become acquainted with its formation and history.

The beginnings of a separate industry

While the informal process of managing money has been around since the beginning of the 20th century, the industry did not begin to mature until the early 1970s. Prior to that time, investment management was completely relationship-based. Assignments to manage assets grew out of relationships that banks and insurance companies already had with institutions—primarily companies or municipal organizations with employee pension funds—that had funds to invest. (A pension fund is set up as an employee benefit. Employers commit to a certain level of payment to retired employees each year and must manage their funds to meet these obligations. Organizations with large pools of assets to invest are called institutional investors.)

These asset managers were chosen in an unstructured way—assignments grew organically out of pre-existing relationships, rather than through a formal request for proposal and bidding process. The actual practice of investment management was also unstructured. At the time, asset managers might simply pick 50 stocks they thought were good investments—there was not nearly as much analysis on managing risk or organizing a fund around a specific category or style. (Examples of different investment categories include small cap stocks and large cap stocks. We will explore the different investment categories and styles in a later chapter). Finally, the assets that were managed at the time were primarily pension funds. Mutual funds had yet to become broadly popular.

ERISA, 401(k) plans and specialist firms

The two catalysts for change in the industry were: 1) the broad realization that demographic trends would cause the U.S. government's retirement system (Social Security) to be underfunded, which made individuals more concerned with their retirement savings, and 2) the creation of ERISA (the Employment Retirement Income Security Act) in 1974, which gave employees incentives to save for retirement privately through 401(k) plans. (401(k) plans allow employees to save pre-tax earnings for their retirement.) These elements prompted an increased focus on long-term savings by individual investors and the formation of what can be described as a private pension fund market.

These fundamental changes created the opportunity for professional groups of money mangers to form "specialist" firms to manage individual and institutional assets. Throughout the 1970s and early 1980s, these small firms specialized in one or two investment styles (for example, core equities or fixed income investing).

During this period, the investment industry became fragmented and competitive. This competition added extra dimensions to the asset management industry. Investment skills, of course, remained critical. However, relationship building and the professional presentation of money management teams also began to become significant.

The rise of the mutual fund

In the early to mid-1980s, driven by the ERISA laws, the mutual fund came into vogue. While mutual funds had been around for decades, they were only generally used by almost exclusively financially sophisticated investors who paid a lot of attention to their investments. However, investor sophistication increased with the advent of modern portfolio theory (the set of tools developed to quantitatively analyze the management of a portfolio; see sidebar below). Asset management firms began heavily marketing mutual funds as a safe and smart investment tool, pitching to individual investors the virtues of diversification and other benefits of investing in mutual funds.

With more and more employers shifting retirement savings responsibilities from pension funds to the employees themselves, the 401(k) market grew rapidly. Consequently, consumer demand for new mutual fund products exploded (mutual funds are the preferred choice in most 401(k) portfolios). Many specialists responded by expanding their product offerings and focusing more on the marketing of their new services and capabilities.

Modern Portfolio Theory

Modern Portfolio Theory (MPT) was born in 1952 when University of Chicago economics student Harry Markowitz published his doctoral thesis, “Portfolio Selection,” in the *Journal of Finance*. Markowitz, who won the Nobel Prize in economics in 1990 for his research and its far-reaching effects, provided the framework for what is now known as Modern Portfolio Theory. MPT quantifies the benefits of diversification, looking at how investors create portfolios in order to optimize market risk against expected returns. Markowitz, assuming all investors are risk averse, proposed that investors, when choosing a security to add to their portfolio, should not base their decision on the amount of risk that an individual security has, but rather on how that security contributes to the overall risk of the portfolio. To do this, Markowitz considered how securities move in relation to one another under similar circumstances. This is called "correlation," which measures how much two securities fluctuate in price relative to each other. Taking all this into account, investors can create “efficient portfolios,” ones with the highest expected returns for a given level of risk.

Consolidation and globalization

The dominant themes of the industry in the 1990s were consolidation and globalization. As many former “specialists” rapidly expanded, brand recognition and advanced distribution channels (through brokers or other sales vehicles) became key success factors for asset management companies. Massive global commercial and investment banks entered the industry, taking business away from many specialist firms. Also, mutual fund rating agencies such as Lipper (founded in 1973, now a part of Reuters) and Morningstar (founded in Chicago in 1984) increased investor awareness of portfolio performance. These rating agencies publish reports on fund performance and rate funds on scales such as Morningstar’s five-star rating system.

These factors led to a shakeout period of consolidation. Over the last 20 years, there have been well over 150 mergers in the industry, creating well-established and formidable players, such as BlackRock and JP Morgan Asset Management. The top-10 mutual fund firms now control roughly 50 percent of total assets while the top-20 mutual funds control roughly 65 percent of total assets.

Traditional versus alternative asset managers

The dominant theme over the past five to 10 years has been the proliferation of alternative asset managers. It is necessary to make the distinction between traditional asset managers and alternative asset managers. Traditional asset managers (such as mutual funds) are highly regulated entities that are governed by strict laws and regulations. The Securities and Exchange Commission (SEC) is the principal governing body and regulates these funds under the Investment Company Act of 1940. The rules governing traditional asset managers are primarily instilled to protect the investors and limit the amount of unnecessary risk-taking. Traditional asset managers have defined investment mandates, which determine what types of securities and strategies they can pursue in a given portfolio. These strategies are discussed in detail in further chapters.

Alternative asset managers include assets classes such as hedge funds, private equity and venture capital. Their investment strategies and regulation differ from traditional asset managers as they are lightly regulated investment vehicles that do not always have defined investment strategies or risk tolerances. These asset classes are often designed to be uncorrelated with the broad stock and bond markets and seek to provide positive returns in a variety of economic situations. Since alternative investments are very risky, investors need to be deemed “accredited” (which is determined by net worth) in order to invest in these products.

The Industry Today

A robust economy has led to ever increasing wealth creation, which in turn led to even greater demand for money management services today. Some analysts estimate the total global investable asset universe to be worth around $60 trillion, having grown by roughly 10 percent annually over the past decade. According to Merrill Lynch, there are 9.5 million people around the world with greater than $1 million in financial assets, up from 8.2 million in

2004. Mutual fund demand has continued to increase; as of 2006, there were 9,000 different funds in the market (up from just 3,000 in 1990). In fact, nearly 50 million households invest in mutual funds, with a total worth of $24 trillion as of June 2007 ($1 trillion as recently as 1990).

As the industry has matured, total assets under management (AUM) in the United States have grown to $60 trillion. Consolidation and globalization have created a diverse list of leading industry players that range from well-capitalized divisions of investment banks, global insurance companies and multinational commercial banks to independent behemoths, such as Fidelity and Capital Group.

Below is a list of the 20-largest U.S. asset management companies as of 2006. We ask that you pay attention to one critical component that may not be immediately obvious: the leading players in the industry are located all over the U.S. Working in the industry, unlike other areas of financial services like investment banking, does not require that you live in a particular region of the country.

Largest U.S. Money Managers

Ranking	Headquarters	2006 AUM ($ Billions)
1 Barclays Global Investors	San Francisco, CA	1,814
2 State Street Global Advisors	Boston, MA	1,744
3 Capital Group Cos	Los Angeles, CA	1,403
4 Fidelity Investments	Boston, MA	1,384
5 BlackRock	New York, NY	1,124
6 JPMorgan Assest Management	New York, NY	1,013
7 Legg Mason	Baltimore, MD	953
8 AXA Group (Alliance Bernstein)	New York, NY	915
9 Mellon Financial Corp	Pittsburgh, PA	880
10 Vanguard Group	Valley Forge, PA	832
11 Allianz Global Investors of America	Newport Beach, CA	765
12 Northern Trust Global Investments	Chicago, IL	697
13 Goldman Sachs Group	New York, NY	657
14 Morgan Stanley Investment Management	New York, NY	586
15 Wellington Management Company	Boston, MA	575
16 Franklin Resources	San Mateo, CA	553
17 Prudential Financial	Newark, NJ	520
18 Columbia Management and Affiliates	Boston, MA	519
19 TIAA-CREF	New York, NY	406
20 MassMutual Financial Group	Springfield, MA	368

Source: Institutional Investor

More than just investment

More than ever, asset management companies are focusing on more than just investing. Business decisions, such as marketing and distribution, global growth and technology integration, are becoming increasingly important factors in the success of investment management firms. While this guide will focus mainly on developing a career on the investment side of the investment management industry, we will also spend some time discussing the growing alternative career opportunities relating to these "non-investment" business issues.

CAREER GUIDE

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INVESTMENT MANAGEMENT

Buy-side vs. Sell-side

CHAPTER 1

If you've ever spoken with investment professionals, you've probably heard them talk about the "buy-side" and the "sell-side." What do these terms mean, what are the differences in the job functions, and how do the two sides of the Street interact with one another?

What's the difference?

The sell-side refers to the functions of an investment bank. Specifically, this includes investment bankers, traders and research analysts. Sell-side professionals issue, recommend, trade and "sell" securities to the investors on the buy-side to "buy." The sell-side can be thought of primarily as a facilitator of buy-side investments—the sell-side makes money not through a growth in value of the investment, but through fees and commissions for these facilitating services. Simply stated, the buy-side refers to the asset managers who represent individual and institutional investors. The buy-side purchases investment products (such as stocks or bonds) on behalf of their clients with the goal of increasing its assets. In this chapter, we'll take a brief look at the types of jobs on each "side." The rest of the book will look at the buy-side in detail. There are several different career options on the sell-side and buy-side; the guide will go through these in this chapter.

What are the differences between buy-side and sell-side jobs?

On the surface, the roles of buy-side and sell-side analysts sound remarkably similar. However, the day-to-day job is quite different. Sell-side analysts not only generate investment recommendations, they also need to market their ideas. This involves publishing elaborate and lengthy investment reports and meeting with their buy-side clients. In contrast, the buy-side analyst focuses entirely on investment analysis. Also, the buy-side analyst works directly with portfolio managers at the same firm, making it easier to focus on the relevant components of the analysis. The sell-side analyst is writing not for a specific team of professionals, but for the buy-side industry as a whole.

Despite these differences in responsibilities, professionals in buy-side and sell-side research analyst positions develop similar skill sets. In fact, sell-side research and investment banking positions are the most popular training grounds for finance professionals who eventually switch to the buy-side.

How do the buy-side and sell-side interact?

Sell-side firms earn a trading fee every time a security (such as a bond or a stock) is bought or sold in a buy-side firm's portfolio. Because portfolio trades can generate sizeable commissions, sell-side firms (investment banks) have quite an incentive to develop relationships with the asset managers. Through institutional salespeople, investment banks provide asset managers with services such as analyst recommendations and access to firm sponsored IPOs and debt offerings. Additionally, the traders and salespeople who want asset managers' business will often present them with gifts such as expensive dinners and tickets to sporting events. An investment management professional in New York says, "I have been to a Yankees games, a Knicks game, the U.S. Open, a rock concert, and eaten at over a dozen of the city's finest expensive restaurants. It's good to be the client." At the same time, another insider from a major asset management remarks, "It's important to be somewhat conservative. No firm wants to have it known that their guys have a lavish lifestyle and are out partying all night long; it might make it hard to convince the Carpenter's Union that you will do the best job possible managing their money." Most firms today prohibit employees from accepting gifts in excess of $100. So while you may still have dinner at a nice restaurant if you have a business meeting, do not expect to get World Series tickets anytime soon.

Jobs on the Sell-side

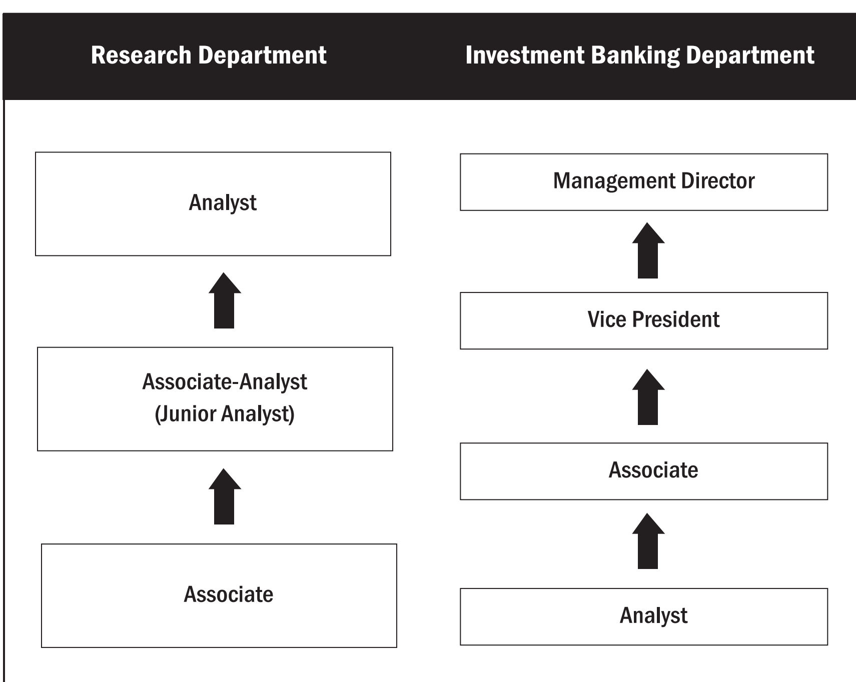
Sell-side firms, such as Citigroup, JP Morgan and Morgan Stanley, offer recent graduates the opportunity to join structured training programs culminating with placement into one of the bank's various divisions such as investment banking, sales and trading, or equity research (it's important to note that the above-mentioned firms also offer buy-side jobs through their investment management units). Because of a relatively larger number of job assignments, as well as higher turnover of staff, the sell-side employs more recent college and business school graduates than the buy-side. For instance, many large investment banks hire upwards of 100 recently minted MBAs and college graduates annually to begin as bankers and research analysts.

There are two primary career paths for recent undergrads and MBAs in a sell-side firm: sales and trading, and investment banking. Both equity and fixed income research typically fall under the sales and trading umbrella, although some banks break out research entirely on its own.

Positions in sell-side research

The primary position for those interested in investment management on the sell-side will be in either equity or fixed income research. If you wish to explore other opportunities in investment banks, we recommend reading the *Vault Career Guide to Investment Banking*. Research professionals analyze company and industry fundamentals, predict earnings and cash flows, determine appropriate valuations and recommend investments to buy-side clients. Typically, recent graduates hired out of college work as associates to senior industry research analysts. Individuals hired from business schools generally start as research associate-analysts (or junior analysts) working directly with the lead industry analyst.

The hierarchy in a research department can be quite confusing since the nomenclature differs with traditional investment banking. The senior role in research is analyst (which is confusing since it is the most junior role in investment banking). The differences in hierarchies are displayed in the graph below:



Sell-side research associates spend the majority of their day gathering industry data, populating investment models, and preparing the foundations of company and industry reports. Over time, they typically garner more responsibilities—such as attending industry events and investor presentations, and running various financial analyses—as they work their way to the associate-analyst level.

Sell-side research associate-analysts (junior analysts) build investment models, assist in generating investment recommendations, write company and industry reports and help to communicate recommendations to buy-side clients. Over time, the associate-analyst may often pick up coverage of additional stocks (often small or mid cap), using the analyst as a mentor.

Positions in investment banking

Investment banking professionals assist companies in raising capital and exploring various financial alternatives. (Professionals in I-banking are called analysts if they are recent college graduates and associates if they are recent MBA graduates.) Some of the most common transactions that investment bankers work on are initial public offerings (IPOs) and company mergers and acquisitions. Typically, analysts and associates work between 80 and 100 hours per week preparing presentations and financial models for banking clients. Undergraduate students have the opportunity to enter into "analyst" training programs while MBA graduates have the opportunity to enter into "associate" training programs. After training, they are placed into either industry groups—such as media, financial services, or industrials—or into product groups—such as M&A, equity capital markets, or debt capital markets.

Investment banking vs. investment management

There are several differences between the two careers. The primary difference is that investment bankers work in the primary markets, structuring and issuing various securities, while investment managers work in the secondary markets, making decisions on which securities to invest in. For more information on investment banking, please see the *Vault Career Guide to Investment Banking.*

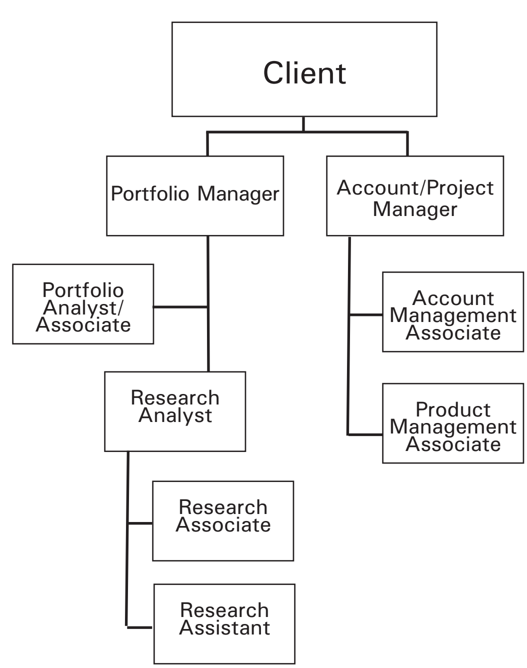
Jobs on the Buy-side

Buy-side firms are structured in a far less formal manner than sell-side firms. Consequently, career paths are more flexible and job descriptions vary more from one firm to another. This presents the opportunity for very intelligent and successful individuals to be promoted at a very young age. In general, buy-side firms have a three-segment professional staff consisting of:

- Portfolio managers who invest money on behalf of clients
- Research analysts who provide portfolio managers with potential investment recommendations and in some cases invest money in their respective sectors
- Account and product managers who manage client relationships and distribute the investment products to individual and institutional investors

When beginning your career on the buy-side, you typically will start as an assistant or associate in one of these three areas.

Professional Positions in Asset Mangement



Structure: Buy-side vs. Sell-side

In general, investment management companies are less structured than most other types of finance firms, including investment banks, commercial banks and accounting firms. As a result, investment management positions have less defined job descriptions than positions at other types of finance firms. For example, investment banking typically has a three year analyst program for college grads, a three-year associate program for MBA grads (or directly promoted analysts), and then promotions to vice president and managing director. Investment management careers have a much less rigid hierarchy and there is usually no formal training program. Job descriptions for similar job titles in the investment management industry differ from firm to firm (for example, a new undergrad hire is considered an associate, not an analyst). And only the largest firms in asset management have all of the positions described in this book. That said, when interviewing for investment management positions, you should ask your interviewer to clarify exact job responsibilities. By doing so, you'll not only gain insight into the position, you'll also sound informed about the (lack of) structure in the industry.

Positions for recent college graduates

Recent college graduates typically enter the industry as research associates or portfolio manager associates. In some instances, undergrads with non-business educational backgrounds can start as research assistants and work their way to associate promotion. Both positions offer great opportunities to learn the nuances and fundamentals of the business by working directly with senior analysts and portfolio managers.

Research associates maintain investment models, gather industry and company information and help devise recommendations. Investment research associates support research analysts who focus on particular areas of investment (for example, a number of companies in an industry), rather than specific investment funds. You will often work for one or more research analysts who focus on a particular industry.

Portfolio manager associates screen for potential investments, monitor portfolio characteristics, and assist in client relations. Portfolio manager assistants offer support to portfolio managers, who typically oversee specific investment funds (for example, a specific mutual fund or pension fund).

Research assistants perform both administrative functions as well as those duties of a research associate. Tasks include answering the phone, scheduling meetings, listening to earnings conference calls if the associate or analyst is too busy, and data analysis. Over time, if the assistant shows the aptitude and ambition for research, more responsibility can be thrown his/her way. This can often lead to a promotion to research associate.

Most people spend two to three years in these positions before seeking an MBA and moving up. On occasion, associates are promoted directly to senior analysts without an MBA. However, this is rare and tends to occur only at the smaller investment management firms.

Another, less traveled, route for recent college graduates is to join a firm's marketing and sales department as either an account management or product management associate.

Account management associates assist in creating portfolio review presentations, developing promotional presentations for potential new clients, and answering RFPs (requests for proposals) issued by institutions seeking to hire new investment managers. They are also in charge of managing and servicing existing clients. The role is traditionally more of a marketing than an investing position.

Product management associates serve as a liaison between the portfolio manager, account manager and client. They typically have a greater in depth knowledge of the particular product's (i.e., stock mutual fund) strategy and investment focus. Product associates often seek new assets to put into their fund and have a strong understanding of both the fund's investment performance and external markets.

Account and product management have become increasingly critical functions in the investment management industry. This path is an outstanding alternative for those interested in the industry but not driven by investing money. Also, the role of an account or product management associate can serve as an entry point to the industry or a springboard to a switch to the investment side.

Positions for recent MBA graduates

Recent MBA graduates or working professionals with considerable investment experience typically enter the industry as investment research analysts. They are usually assigned a small industry to cover, providing them with an opportunity to get their feet wet.

Research/portfolio analysts provide insight and investment recommendations to portfolio managers. The typical day includes listening to company management conference calls, attending industry conferences, building investment models, developing industry trends and benchmarking company progress to its peers.

Success as a research analyst will lead to advancement to larger industries and ultimately to the role of portfolio manager (a large percentage of portfolio managers traverse through the ranks as research analysts).

Compensation

In general, compensation in asset management is a combination of base salary and bonus. As you move up in the organization to senior portfolio manager or senior account and product management officials, for example, your pay becomes more heavily weighted toward bonuses. Senior portfolio manager pay is somewhat contingent upon relative investment fund performance, size of the fund managed, new assets invested in the fund and overall firm performance. Senior account and product management compensation is weighted toward new account generation and the level of attrition by existing accounts.

Mid- and entry-level

Midlevel investment staff is paid both a salary and bonus. Bonuses are less based on specific investment results (given that these people have less impact on the actual performance). Instead, performance reviews are based on individual contributions, value added to the team, and overall firm results. The split between salary and bonus is more heavily weighted to salary than at the senior levels.

Entry-level assistants are also compensated with salary and bonus, but the majority is weighted toward salary. Performance-based bonuses are a function of overall firm and division results as well as contributions made in their role. The spread between high and low bonuses to entry-level positions is much narrower than at the mid and senior levels of the organization.

Other factors

Aside from job title, there are two other factors that largely impact the amount and type of compensation. First, is the type of the asset management firm—traditional or alternative? Mutual funds offer steady compensation and job security while hedge funds offer the potential for high compensation but have minimal job security. Second, is the structure of the asset management firm—public or private? Public mutual funds (T. Rowe Price and Franklin Templeton) and hedge funds (Fortress and GLG) can offer employees stock options or restricted stock. Many asset management firms are private, and can offer their senior personnel direct equity interests in their companies. This can be highly lucrative, as many firms pay out a significant portion of their annual earnings to their equity partners.

Recommended Reading

Preparing for a career in investment management requires the same research as any other field. So other than this Vault career guide and the Vault web site, what are some resources for the future money manager?

There are many textbooks that teach you various technical skills or outline the author's investment philosophy and techniques. These types of books are easily found in any library or bookstore. Harder to find are books that tell you about what the actual experience of working in this business is like. Unfortunately, there are no equivalents to the numerous books describing authors' experiences in investment banking (John Rolfe and Peter Troob's *Monkey Business*, Michael Lewis' *Liar's Poker* and Frank Partnoy's *F.I.A.S.C.O.*). Part of the reason for this is that most buy-siders are in the business permanently—nobody is going to write an account of how they misspent their days at a Fidelity or Putnam when they're still working in the business (and may well have gotten their current position on the strength of their experience at a Fidelity or Putnam).

That said, the following are some books that will give you a good idea of the actual life and career investment managers lead.

Primers:

Gremillion, Lee. *A Purely American Invention: The U.S. Open-End Mutual Fund Industry.* (National Investment Company Service Association, 2000.)

Gremillion is a partner in the PricewaterhouseCoopers Investment Management consulting group. He was previously a professor at Indiana University and Boston University. Like Pozen's *Mutual Fund Business*, this book provides the basic info on the business.

Pozen, Robert and Crane, Sandra. *The Mutual Fund Business.* (MIT Press, 1998.)

Robert Pozen is the former president of Fidelity Management and Research. This book is a collection of essays and statistics that provide the fundamentals of the business. Not exactly a page-turner, but a valuable primer nonetheless.

Autobiographies and histories:

Dreyfus, Jack. *The Lion of Wall Street: The Two Lives of Jack Dreyfus.* (Regnery, 1996.)

Jack Dreyfus founded the firm that bears his name and was a pioneer in the mutual fund industry. In this amusing autobiography, he recounts his professional life. Due to an onset of clinical depression, Dreyfus began a lifelong crusade to encourage the FDA to approve the drug Dilantin, the retelling of which makes up the second half of the book.

Ellis, Charles and Vertin, James. *Wall Street People: True Stories of Today's Masters and Moguls.* (John Wiley & Sons, 2001.)

Ellis and Vertin both have had an inestimable impact on modern portfolio management. This book has interviews with some of the most prominent figures in modern investing: Jim Rogers, George Soros, Warren Buffett and Larry Tisch are just a few of the people they talk to here.

Ellis, Charles. *Capital: The Story of Long Term Investment Excellence* (John Wiley & Sons, 2004.)

Ellis takes you inside The Capital Group—one of the largest and most elite, yet highly secretive investment management organizations in the world. The book highlights how corporate culture and long-term investment strategies have made The Capital Group one of the most successful investment managers in history.

Fisher, Phil A. *Common Stocks and Uncommon Profits.* (John Wiley & Sons, 1996.)

Phil Fisher is one of the greatest growth investors in history. This book leads you through the development of his philosophy and firm, Fisher & Company, as well as illustrating some major investment decisions he made.

Henriques, Diana. *Fidelity's World: The Secret Life and Public Power of the Mutual Fund Giant.* (Touchstone, 1997.)

Henriques discusses the history, business practices and inner life of the industry leader.

Lowenstein, Roger. *When Genius Failed: The Rise and Fall of Long-Term Capital Management.* (Random House, 2000.)

Lowenstein, a *Wall Street Journal* reporter, describes the founding and eventual crash of the only hedge fund ever to have several Nobel Prize winners on staff. A fascinating read.

Neuberger, Roy. *So Far, So Good: The First 94 Years.* (John Wiley & Sons, 2000.)

Roy Neuberger has been on the Street since 1929 and is a co-founder of Boston-based Neuberger & Berman. His autobiography tells of his professional and personal life, in addition to his extensive collection of American modernist paintings.

Niederhoffer, Victor. *Education of a Speculator.* (John Wiley & Sons, 1998.)

Niederhoffer runs a hedge fund whose performance has been quite volatile. This book is a charming (though quite eccentric) autobiography. Niederhoffer, by the way, collects rare books.

Sosnoff, Martin. *Silent Investor, Silent Loser.* (Richardson, Steirman & Black, 1987)

Sosnoff is a co-founder of Atlanta/Sosnoff Capital and one of the best thinkers on the Street. In addition to his professional life, Sosnoff describes, in-depth, some of the actual investment decisions he has made in the past. Sosnoff is also a prominent collector of American modernist paintings.

Newspapers, magazines and journals:

Barron's

Financial Analyst Journal

Institutional Investor

Journal of Portfolio Management

Pensions and Investments

The Wall Street Journal

Reference books:

Nelson's Directory of Investment Managers

Nelson's Directory of Investment Research

Financial Research Breakdown

Up until now, this guide has mainly discussed research as one of the primary entry points into the asset management industry. What exactly is research and what are the different types? How does it differ if you are working for a traditional asset manager or an alternative asset manager? This chapter will provide several distinctions between types of research—breaking it down by style, capital structure and firm. While the main focus will be on fundamental equity and fixed income research, it will also discuss the other types of research as well as the functional roles analysts play at different types of firms.

Research Styles

Thus far, we have mostly been referring to fundamental research—the analysis of a company, financial statements, and company and industry trends in order to predict stock movement. However, there are several other types of research asset managers conduct across many different types of products. Other styles include quantitative research and technical research.

Fundamental research

Fundamental research takes a deep dive into a company's financial statement as well as industry trends in order to extrapolate buy and sell investment decisions. There is no clear cut way in conducting fundamental research but it normally includes building detailed financial models, which project items such as revenue, earnings, cash flows and debt balances. Some asset managers may focus solely on earnings growth while others may focus on returns on invested capital (ROIC). It is important for the candidate to understand the firm's investment philosophy. This can usually be achieved by doing research on the company's web site. It is important to note that while some firms have clear cut investment philosophies, others may not.

Aside from building a financial model, the fundamental research analyst will read through company SEC filings (such as the 10K, 10Q and Proxy), talk to company management as well as sell-side analysts, and visit company facilities in order to get a complete perspective of the potential investment.

Again, the way analysts go about this often differs. Some researchers feel comfortable with only the resources at their desk—their computer, internet, and phone—while others refuse to make investment decisions without face-to-face management meetings and visiting manufacturing facilities (which is often referred to as "kicking the tires").

Fundamental analysts will also conduct industry research and determine how each company in that particular industry will gain or lose from their findings. For example, a fundamental analyst covering the defense industry will want to make projections on how fast the U.S. defense budget may grow. Questions the analyst may ask himself/herself are: at what rate should I expect the U.S. defense budget to grow? Is the absolute level of spending sustainable? Which companies should benefit from the growth? Will it be companies that make fighter planes like Lockheed Martin or companies that make aircraft carriers like Northrop Grumman?

Quantitative research

Quantitative research is built on algorithms and models, which seek to extrapolate value from various market discrepancies or inefficiencies. The key difference between fundamental and quantitative research is where the analyst puts in the work. The majority of work for a quantitative analyst rests within choosing the parameters, inputs, and screens for the computer generated model. These models can take on a multitude of forms. For example, a simple model that seeks to take advantage of price discrepancies in the S&P 500 may split the 500 stocks between those that are "undervalued" as determined by a low price-to-book multiple from those that are "overvalued" as determined by a high price-to-book multiple. The quantitative analyst would build a model that would screen for these parameters and would buy (or go long) the undervalued stocks while simultaneously sell (or short) the overvalued stocks. In reality, quantitative models are much more complex than the example provided and often screen for thousands of securities across a multitude of exchanges. It is not a surprise to learn that the "brains" behind these models often have PhDs in fields such as finance and physics.

Technical research

Technical research or analysis is the practice of using charts and technical indicators to predict future prices. Technical indicators include price, volume and moving averages. Technical analysts are sometimes known as "chartists" because they study the patterns in technical indicator charts in order to extrapolate future price movements. Over time, technical analysts try to identify patterns and discrepancies in these charts and use that knowledge to place trades. While fundamental analysts believe that the underlying fundamentals (revenue, earnings, cash flow) of a company can predict future stock prices, technical analysts believe that technical indicators can predict future stock prices. The skill set for technical research is very different than fundamental research. Some technical analysts rely solely on their eyes to spot trading opportunities while others use complex mathematical indicators to identify market imbalances.

Capital Structure: Equity vs. Fixed Income

Across the buy-side and sell-side, fundamental analysts often focus on either equities or fixed income (debt). What are the differences between a fundamental equity and fixed income investor? The differences primarily lie within the fundamental financial analysis and breadth of coverage.

Fundamental financial analysis

Fundamentals affect equity prices and bond prices in similar fashions. If a company is generating strong revenue and earnings growth, improving its balance sheet, and is gaining market share in its industry, both its stock and bond prices will likely increase over time. Most equity analysts and stock investors are focused on net income per share or earnings per share (EPS), as this represents the amount a company earns and is available per share of common stock. Another factor that equity investors are concerned about is how management deploys its excess cash. Analysts are constantly looking for earnings accretion, or the ability to increase earnings per share. If company management uses excess cash to make a smart acquisition or repurchase its own stock, equity investors are generally pleased as the transaction increases EPS.

For fixed income analysts and bond investors, the emphasis is not necessarily on earnings but more so on "earnings before interest and taxes" or EBIT. Bond holders are primarily focused with receiving interest payments and the return of principal. Therefore, they often only follow the income statement up until the point where interest is paid. Another key focus for fixed income investors is the amount of debt (or leverage) a company has on its balance sheet. Since debt holders have claims on a firm's assets, the more debt there is, the less of a claim each debt holder may have on a given amount of assets. Fixed income analysts and investors are often focused on two metrics—the leverage ratio (debt/EBITDA) and interest coverage ratio (EBITDA/interest expense). EBITDA stands for earnings before interest taxes depreciation and amortization, and is generally used as a proxy for cash flow. Fixed income analysts like a decreasing leverage ratio as it signifies less debt on the balance sheet and a greater ability to repay it, and an increasing interest coverage ratio as it signifies the greater ability to service the outstanding debt.

Breadth of coverage

Breadth of coverage refers to the amount of companies and securities an analyst covers. Most companies usually issue only one type of equity security but could have several pieces of debt outstanding. The fixed income analyst usually would cover all of these debt instruments, which may each have separate and distinct provisions that could alter their individual performances. Additionally, a company may have convertible bonds, which the fixed income analyst would typically cover.

Sell-side equity analysts typically cover between 15 and 20 stocks and are expected to know even the most minutiae of details about each company. Buy-side equity analysts typically follow 40 to 70 companies. While they may not know as much detail as a sell-side analyst, if they make a sizable investment in a stock, they are expected to know just as much if not more detail than their sell-side counterpart.

While coverage for equity analysts is typically broken down into industry subsectors (for example, airlines would be a subsector of the transportation industry), fixed income analysts often cover the entire industry (which could equate to over 100 companies). So while there can be several equity analysts covering the transportation industry, there may only be one fixed income analyst. Debt markets are often less liquid than equity markets and do not trade on small pieces of information. Therefore, the fixed income analyst does not need to know as much detail about each particular company. However, should the buy-side fixed income analyst make a sizable investment in a company, it would not be surprising for him to know as much detail as an equity analyst.

Research Roles: Traditional vs. Alternative Asset Managers

While fundamental analysts generally perform the same function regardless of the type of firm, the role can be slightly different and is mainly driven by the investment time horizon.

Traditional

Traditional asset managers often hire analysts and put them in charge of becoming "experts" in certain industries. Achieving this status takes years of diligent research and the traditional asset managers are often patient with their analysts as they build up industry knowledge. The research process for a particular company could take months before an investment is made. However, since both analysts and clients at traditional asset managers are typically long-term investors, they are very patient and will often wait years to capitalize on certain themes.

Alternative

Alternative asset managers typically have a shorter time horizon as their clients depend on positive returns every year. They often do not have the luxury of waiting several years for investments to "pay off" as do traditional asset managers. Therefore, analysts at hedge funds often have to act quickly and decisively. They are not always categorized by industry but may cover several industries (and are then referred to as "generalists"). Oftentimes, a portfolio manager at a hedge fund may tell his analyst to research a particular industry in the morning and get back to him with the best investments by the afternoon. The day is often intense. One hedge fund analyst remarked, "I spent the early morning looking at airline stocks, the afternoon looking at retail stocks, and finished the day looking at credit card processors."

For a comparison of a typical day on the job between analysts at each type of firm, please see Chapter Ten: Days in the Life.

The Clients of Asset Managers

CHAPTER 3

As you can see from our initial discussion, the structure of the asset management industry can seem a bit complicated. Don't worry—over the next two chapters, we will explain how buy-side firms operate so you can easily understand how they fit together.

Specifically, we'll discuss:

- The clients investment management firms serve
- The investment styles used by the firms

Armed with this knowledge, you'll be ready to organize your career search in a targeted and effective manner.

Different types of clients

Typically, asset management firms are categorized according to the kind of clients they serve. Clients generally fall into one of three categories: (1) mutual funds (or retail), (2) institutional investors, or (3) high net worth. Some firms specialize in one of the three components, but most participate in all three. Asset management firms usually assemble these three areas as distinct and separate divisions within the company.

It is critical that you understand the differences between these client types; job descriptions vary depending on the client type. For instance, a portfolio manager for high-net-worth individuals has an inherently different focus than one representing institutional clients. A marketing professional working for a mutual fund has a vastly different job than one handling pensions for an investment management firm. Later in this guide, we will discuss how different positions in the industry differ across the main organizing features of the industry (client types and investment style).

For now, we'll begin our discussion of the industry by examining different client types.

Mutual Funds

Mutual funds are investment vehicles for individual investors who are typically below the status of high net worth (we will discuss individual high net worth investing later in this chapter). Mutual funds are also sometimes known as the retail division of asset management firms.

Mutual funds are structured so that each investor owns a share of the fund—investors do not maintain separate portfolios, but rather pool their money together. Their broad appeal can generally be attributed to the ease of investing through them and the relatively small contribution needed to diversify investments. Investment gains from mutual funds are taxable unless the investment is through an employee 401(k) plan. (If you take some money you've saved and invest in a mutual fund, you'll have to pay capital gains taxes on your earnings.)

In the past 10 years, mutual funds have become an increasingly integral part of the asset management industry. They generally constitute a large portion of a firm's assets under management (AUMs) and ultimate profitability.

There are three ways that mutual funds are sold to the individuals that invest in them—(1) through third-party brokers or "fund supermarkets"; (2) direct to customer, and (3) through company 401(k) plans. The size and breadth of the asset management company typically dictates whether one, two or all three of the methods are used.

Third-party brokers and "fund supermarkets"

Over the past five years, an increasingly popular distribution platform for mutual funds has been to sell them through brokerage firms or "fund supermarkets." By selling through these channels, asset management companies can leverage the huge access to the clients that the brokers maintain. In a classic broker relationship, a company with a sales force partners with several investment management firms to offer their investment products. Then, for instance, Merrill Lynch and Morgan Stanley not only sell their own mutual funds, but offer their clients access to mutual funds from Vanguard, Putnam and AIM as well. This additional access to multiple mutual fund products helps the brokers win business; brokers earn a commission from the asset management companies they recommend. Brokers develop relationships with individual investors not only by executing trades, but also by dispensing advice and research.

Fund supermarkets, such as Charles Schwab, became increasingly popular in the late 1990s. These firms are set up similarly to brokerage houses, but the supermarkets carry virtually every major asset management firm's products, don't expend as much energy on providing advice and other relationship-building activities, and take lower commissions. The rise of the fund supermarkets has forced conventional brokerage firms to open up their offerings to include more than a few select partners. It has also influenced the way mutual funds market themselves. Previously, funds marketed to brokers, and expected brokers to then push their products to individual investors. Now, mutual fund companies increasingly must appeal directly to investors themselves (which is why you see so much advertising for companies like Fidelity and Vanguard).

Direct to customer

Through an internal sales force, asset management companies offer clients access to the firm's entire suite of mutual funds. This type of sales force is very expensive to maintain, but some companies, such as Fidelity and T. Rowe Price, have been extremely successful with this method. Prior to the rise of brokers and fund supermarkets, direct to customer was the primary vehicle for investment in many mutual funds—if you wanted a Fidelity fund, you had to open an account with Fidelity.

401(k) plans

An increasingly popular sales channel for mutual funds is the 401(k) retirement plan. Under 401(k) plans, employees can set aside pre-tax money for their retirements. Employers hire asset management firms to facilitate all aspects of their employees' 401(k) accounts, including the mutual fund options offered. By capturing the management of these 401(k) assets, the firms dramatically increase the sale and exposure of their mutual fund products. In fact, many asset management companies have developed separate divisions that manage the 401(k) programs for companies of all sizes.

Below is a list of some of the largest mutual fund managers. We have also included the 10-largest mutual funds and the assets that are invested in each. As we noted earlier, consolidation and global competition has created a small group of very large players in the mutual fund marketplace. The top-10 mutual fund firms currently manage over 50 percent of total mutual fund assets.

Large Mutual Fund Managers
The Capital Group - American Funds
Fidelity Investments
BlackRock
JPMorgan Asset Management
Legg Mason
AXA Group (Alliance Bernstein)
Allianz Global Investors of America (PIMCO)
Northern Trust Global Investments
Morgan Stanley Investment Management
Wellington Management Company
Franklin Resources
T. Rowe Price
Janus Capital Group

Largest Actively Managed Mutual Funds	AUM as of 11/2007 ($ in billions)
1 American Funds - The Growth Fund of America	92.2
2 American Funds - Capital World Growth and Income	82.9
3 American Funds - Capital Income Builder	81.4
4 Fidelity - Contrafund	80.3
5 American Funds - Income Fund of America	74.8
6 PIMCO - Total Return	69.4
7 American Funds - Washington Mutual Investors	67.3
8 American Funds - Income	67.1
9 Dodge & Cox Stock	65.7
10 American Funds - EuroPacific Growth	65.0

Institutional Investors

Institutional investors are very different from their mutual fund brethren. These clients represent large pools of assets for government pension funds, corporate pension funds, endowments and foundations. Institutional investors are also referred to in the industry as "sophisticated investors" and are usually represented by corporate treasurers, CFOs and pension boards.

More conservative

Given their fiduciary responsibility to the people whose retirement assets they manage, institutional clients are usually more conservative and diversified than mutual funds.

Unlike investors in mutual funds, institutional clients have separately managed portfolios that, at a minimum, exceed $10 million. Also unlike mutual funds, they are all exempt from capital gains and investment income.

Leading asset managers

Below is a list of the largest institutional asset managers. As you can see, a few are also listed as leaders on the mutual fund chart. But for the most part, these institutional managers are different firms; as mentioned previously, different factors lead to success for different investment clients (we highlight the nuances later in this chapter).

Largest Institutional Asset Managers (tax-exempt)	AUM as of 12/2006 ($ in billions)
1 Barclays Global Investors	1,444
2 State Street Global Advisors	1,332
3 Fidelity Investments	896
4 Legg Mason	692
5 Capital Group Cos.	620
6 AXA Group (Alliance Bernstein)	504
7 Northern Trust Global Investments	502
8 Vanguard Group	402
9 BlackRock	393
10 TIAA-CREF	392

Source: Institutional Investor

Institutional clients hold enormous sums of capital that they must allocate in order to meet the needs of the beneficiaries of the retirement assets. Consequently, the representatives hire multiple institutional asset managers to manage across the full range of investment styles (these styles, such as growth stocks and value stocks, will be detailed in the next chapter).

Largest pension funds

Below is a list of the largest pension funds in the U.S. Funds like CalPERS and General Motors hold well over $100 billion for their retirees. These funds have relationships with many different asset managers and have separate portfolios that cut across every asset class and investment style imaginable. Clearly, developing relationships with these large clients can be highly profitable for the asset management firms.

Largest Pension Funds	AUM as of 12/2006 ($ in billions)
1 California Public Employees	218
2 Federal Retirement Thrift	188
3 California State Teachers	149
4 New York State Common	144
5 Florida State Board	129
6 General Motors	119
7 New York City Retirement	115
8 Texas Teachers	101
9 New York State Teachers	94
10 Wisconsin Investment Board	81

Source: Pensions & Investments

Method of selection

Given the high level of responsibility associated with managing portfolios of these sizes, pension funds utilize a rigorous process of selecting asset managers. In turn, asset management companies have built considerable marketing and sales departments to cater to institutional clients. The selection process typically works as follows:

- An institution, say a pension fund, issues a request for proposal (an RFP), announcing that it is searching for new investment managers in a particular style or asset class.
- Asset management companies respond to the RFP, elaborating on their products, services and credentials.

- Investment consultants are hired by the pension fund to help sort through the RFPs and narrow the list of firms to three to five finalists.
- The finalists meet in person with the pension fund's representatives and further due diligence is performed before the winner is selected.

Due to the sophistication of this process, there are many interesting professional jobs in the institutional sales, marketing and relationship management functions. If you are interested in the investment business, but don't necessarily want to participate in analyzing and selecting portfolio investments, these are career paths that you may wish to pursue (we discuss this in greater detail in later sections).

In the mutual fund world, individuals tend to select funds based on recent performance records and brand recognition. Institutions tend to select asset managers under a much more stringent and analytical process. Specifically, they use the following criterion: 1) superior performance record relative to the firm's peer group, 2) length of investment track record, 3) continuity of the existing core investment team, and 4) consistency in adhering to a specific investment style and discipline.

High Net Worth

High-net-worth individuals represent the smallest but fastest growing client type. Individual wealth creation and financial sophistication over the past decade has driven asset managers to focus heavily in this area. Despite the success of many large asset management firms in the area, the firms that specialize in high-net-worth clients, such as Bessemer Trust and Northern Trust, remain the leaders in this business.

What is high net?

What is a high-net-worth investor? Definitions differ, but a good rule of thumb is an individual with minimum investable assets of $5 to $10 million. These investors are typically taxable (like mutual funds but unlike institutional investors), but their portfolio accounts are managed separately (unlike mutual funds, but like institutions).

High-net-worth investors also require high levels of client service (read: hand-holding). Those considering entering this side of the market should be prepared to be as interested in client relationship management as in portfolio management, although the full force of client relations is borne not by a portfolio manager but a sell-side salesperson in a firm's private client services (PCS) or private wealth management (PWM) division. Says one investment manager about PCS sales, "If [clients] tell them they're out of paper towels, they'll probably go to their houses and bring them." (For more information about lucrative PCS or PWM career opportunities, see the *Vault Career Guide to Investment Banking*.)

In reality, there are two classes of high-net-worth clients: those in the $2 million and above range, and those in the $500,000 to $2 million range. Those with $2 million and above to invest receive customized and separately managed portfolios, while those in the $500,000 to $2 million arena do not. This second class does receive much more personal attention from their PCS salesperson than they would from a traditional retail broker. But, unlike the $2 million and above range people, this second group's portfolio management is derived from cookie-cutter products and strategies. Still, this service is performed by a portfolio manager devoted to high-net-worth clients, and assets aren't actually lumped into a large fund as they would be in a mutual fund.

High-net-worth investors also often use the institutions that manage their assets for other financial services, such as estate planning or tax work.

Clients and consultants

An investment management firm's internal relationship management sales force typically sells high-net-worth services in one of two ways: either directly to wealthy individuals or to third parties called investment consultants who work for wealthy individuals. The first method is fairly straightforward. An investment manager's sales force, the PCS unit, pitches services directly to the individuals with the money. In the second method, a firm's internal sales force does not directly pitch those with the money, but rather pitches representatives, often called investment consultants, of high-net-worth clients. In general, investment consultants play a much smaller role in the high-net-worth area than the institutional side; only extremely wealthy individuals will enlist investment consultant firms to help them decide which investment manager to go with.

The Investment Consultant

Not to be confused with retail brokers, investment consultants are third party firms enlisted by institutional investors, and to a lesser extent by high-net-worth individuals, to aid in the following: devising appropriate asset allocations, selecting investment managers to fulfill these allocations, and monitoring the chosen investment managers' services. An investment consultant might be hired by a client to assist on one or all of these functions depending on certain variables, such as the client's size and internal resources.

As an example of the part that investment consultants play in the investment management game, let's say GM's pension fund is looking to invest $50 million in a certain investment style (say, large cap value equities). GM hires Wilshire Associates, an investment consulting firm, to help it find a large cap value manager. Wilshire will go out and search for the best managers in the sector and, one month later, will come back to GM with three recommendations. GM will review the three firms and then pick one. After GM makes its decision and the $50 million is handed over to the chosen investment manager, Wilshire might also monitor that manager's investment decisions.

True intermediaries, investment consultants have become increasingly important in the past 10 years as a result of a rise in the number of different investment product offerings.

Some of the biggest names in investment consulting:

- Callan Associates
- Ennis, Knupp & Associates
- Evaluation Associates
- Frank Russell Company
- Hewitt Investment Group
- Mercer Investment Consulting
- R.V. Kuhns & Associates
- Rogerscasey
- Watson Wyatt Worldwide
- Wilshire Associates

Investment Styles

CHAPTER 4

"Investment style" is often a loosely used term in the industry and is a reference to how a portfolio is managed.

These styles are typically classified in one of three ways:

1) The type of security (i.e., stocks vs. bonds)

2) The risk characteristics of the investments (i.e., growth vs. value stocks, or U.S. Treasury vs. "junk" bonds)

3) The manner in which the portfolio is constructed (i.e., active vs. passive funds)

It is important to note that each of these styles is relevant to all of the client types covered in the previous chapter (mutual fund, institutional and high-net-worth investing).

The drive for diversification

The investment industry's maturation over the last 20 years has been led by the power of portfolio theory and investors' desire for diversification of investments. During this period, investors have grown more sophisticated, and have increasingly looked for multiple investment styles to diversify their wealth.

Typically, investors (whether they are individual or institutional) allocate various portions of their assets to different investment styles. If you think of the overall wealth of an individual or institution as a pie, you can think of each slice as investing in a different portfolio of securities—this is what's called diversification. The style of a portfolio, such as a mutual fund, is clearly indicated through its name and marketing materials so investors know what to expect from it. Adherence to the styles marketed is more heavily scrutinized by institutions and pension funds than by mutual fund customers. Institutional investors monitor their funds every day to make sure that the asset manager is investing in the way they said they would.

Below, we will describe each investment style classification in detail.

Types of Security

Type of security is the most straightforward category of investment style. For the most part, investment portfolios invest in either equity or debt. Some funds enable portfolio managers to invest in both equity and debt (such as the Fidelity Balanced Fund), while other funds focus on other types of securities, such as convertible bonds. However, for the purpose of this analysis, we will focus on straightforward stocks and bonds.

Stocks

Equity portfolios invest in the stock of public companies. This means that the portfolios are purchasing a share of the company—they are actually becoming owners of the company and, as a result, directly benefit if the company performs well. Equity investors may reap these benefits in the form of dividends (the distribution of profits to shareholders), or simply through an increase in share price.

Bonds

Fixed income portfolios invest in bonds, a different type of security than stocks. Bonds can be thought of as loans issued by organizations like companies or municipalities. (In fact, bonds are often referred to simply as "debt.") Like loans, bonds have a fixed term of existence, and pay a fixed rate of return. For example, a company may issue a five-year bond that pays a 7 percent annual return. This company is then under a contractual obligation to pay this interest amount to bondholders, as well as return the original amount at the end of the term. While bondholders aren't "owners" of the bond issuer in the same way that equity shareholders are, they maintain a claim on its assets as creditors. If a company cannot pay its bond obligations, bondholders may take control of its assets (in the same way that a bank can repossess your car if you don't make your payments).

Although bonds have fixed rates of return, their actual prices fluctuate in the securities market just like stock prices do. (Just like there is a stock market where investors buy and sell stocks, there is a bond market where investors buy and sell bonds.) In the case of bonds, investors are willing to pay more or less for debt depending on how likely they think it is that the bond issuer will be able to pay its obligations.

Types of Stocks and Their Risk Profiles

Most equity portfolios are classified in two ways:

1) By size, or market capitalization, of the companies whose stocks are invested in by the portfolios

2) By risk profile or valuation of the stocks

Market capitalization of investments

The market capitalization (also known as "market cap") of a company refers to the company's total value according to the stock market. It is simply the product of the company's current stock price and the number of shares outstanding. For example, a company with a stock price of $10 and 10 million outstanding shares has a market cap of $100 million.

Companies (and their stocks) are usually categorized as small-, mid- or large-capitalization. Most equity portfolios focus on one type, but some invest across market capitalization.

While definitions vary, small-capitalization typically means any company less than $2 billion, mid-capitalization constitutes $2 to $10 billion, and large-capitalization is the label for firms in excess of $10 billion. As would be expected, large capitalization stocks primarily constitute well-established companies with longstanding track records. While this is generally true, the tremendous growth of new technology companies over the past decade has propelled many fledgling companies into the ranks of large-capitalization. For instance, Google has a market-capitalization of around $200 billion and is one of the largest companies in the world. In the same way, small- and medium-capitalization stocks not only include new or under-recognized companies, but also sometimes include established firms that have struggled recently and have seen their market caps fall. Some good examples of this would be Ford or Eastman Kodak, both of which use to be some of the largest companies, but are now much smaller in size. Most recently, there has been the advent of the micro-cap (under $200 million) and mega-cap (over $50 billion) funds, each with the stated objective of investing in these very small or very large companies.

Risk profiles: "value" vs. "growth" investing

Generally, equity portfolios are defined as investing in either "value" or "growth"—terms that attempt to express expected rates of return and risk. There are many ways that investors define these styles, but most explanations center on valuation. Value stocks can be characterized as relatively well-established, high dividend paying companies with low price to earnings and price to book ratios. Essentially, they are "diamonds in the rough" that typically have undervalued assets and earnings potential. Classic value stocks include pharmaceutical companies like Pfizer and banks such as J.P. Morgan Chase.

Growth stocks (or "glamour" stocks) are companies that investors believe will expand at rates that exceed their respective industries or market. These companies have above average revenue and earnings growth and their stocks trade at high price to earnings and price to book ratios. Technology companies such as Yahoo! and Apple are good examples of traditional growth stocks.

Many variations of growth and value portfolios exist in the marketplace today. For instance, "aggressive growth" portfolios invest in companies that are growing rapidly through innovation or new industry developments. These investments are relatively speculative and offer higher returns with higher risk. Many biotechnology companies and new Internet stocks in the late 1990s would have been classified as aggressive growth. Another classification is a "core stock" portfolio, which is a middle ground that blends investment in both growth and value stocks.

Putting it together

As you can imagine, there are many combinations of size and style variations and equally as many portfolios and investment products. For example, you have your choice of investing in small-cap, growth stock portfolios, mid-cap value stock portfolios or large-cap core stock portfolios. (Or you can invest in small-cap value stock portfolios, mid-cap growth stock portfolios, and so on.)

Investors often refer to the nine boxes of investment styles in order to categorize different portfolios. Mutual fund rating agencies, such as Morningstar, usually categorize funds by this diagram. For example, a large cap value fund would primarily invest in companies with capitalizations around $50 billion and P/E ratios that are below the market average.

Examples of each type of strategy (along with the ticker symbol) are listed in the boxes.

Risk Profile/Valuation

Capitalization	Value	Blend	Growth
Large	Dodge and Cox Stock (DODGX)	Longleaf Partners (LLPFX)	Growth Fund of America (AGTHX)
Mid	Janus Mid Cap Value (JMVX)	Fidelity Low Priced Stock (FLPSX)	T. Rowe Price Mid Cap Growth SHS (RPMGX)
Small	Goldman Sachs Small Cap Value (GSSMX)	JP Morgan Small Cap Core Select (VSSCX)	AIM Small Cap Growth (GTSAX)

We should note that the 9-boxes are only a very generic way of categorizing funds. Mutual funds have created many different strategies over the years, which makes categorizing them difficult. We briefly discussed the "aggressive growth" style above but another example would be the GARP style—or growth at a reasonable price. Examples of GARP funds include T. Rowe Price Growth Stock and Gabelli Growth.

In general, the smaller the company (small-cap stocks), the riskier its stock is considered. This is because large companies are usually older and better established: it's easier to make predictions of large-cap stocks because they have more historical financial data from which analysts can base predictions. Growth stocks are also considered riskier, as investments in those stocks are bets on continued rapid growth (reflected in the high price-to-earnings ratio of these stocks). The biggest risk to investing in these stocks is the potential decline in the rate of revenue or earnings growth. If investors become worried that growth in one of these stocks will slow, it is not uncommon to see the stock drop by 20 percent or more in one day.

Types of Bonds and Their Risk Profiles

Just like stock portfolios, fixed income (bond) portfolios vary in their focus. The most common way to classify them is as follows

1) Government bonds

2) Investment-grade corporate bonds

3) High-yield corporate bonds

4) Municipal bonds

Government bonds

Government bond portfolios invest in the debt issues from the U.S. Treasury or other federal government agencies. These investments tend to have low risk and low returns because of the financial stability of the U.S. government.

Investment-grade corporate bonds

Investment-grade corporate bond portfolios invest in the debt issued by companies with high credit standings. These credit ratings are issued by rating companies like Moody's and Standard & Poor's. They rate debt based on the likelihood that a company will meet the interest obligations of the debt. Moody's, for example, rates investment grade debt from Aaa (the highest quality; most likely to meet interest payments) to Baa (lower quality; less likely). The returns and risks of these investments vary along this rating spectrum. Many corporate bond portfolios invest in company debt that ranges the entire continuum of high-grade debt.

High-yield corporate debt

In contrast to investment grade debt, high-yield corporate debt, also called "junk bonds," is the debt issued by smaller, unproven, or high-risk companies. Consequently, the risk and expected rates of return are higher. (Junk, or high-yield, is defined as a bond with a Standard & Poor's ratings below BBB and/or a Moody's ratings below Baa.)

Municipal bonds

Finally, municipal bond portfolios invest in the debt issued by local governments and agencies, such as public school systems or state-funded projects. The favorable tax treatment on these types of investments makes them a favorite of tax-sensitive investors.

Investment managers also manage bond portfolios that mix together the different types of bonds. Indeed, hybrids of all kinds exist. Typically, though, if you have a lot of money, a better way to diversify is to invest in a fund made up of one type of bond. If, for example, you've got $100 million to invest, you're likely to give $10 million to the best municipal bond fund manger, $10 million to the best corporate bond fund manager, etc., rather than invest all $100 million in a hybrid.

Investment decisions

Just as with equity portfolios, there are a myriad of fixed income portfolio types. While the ratings issued by agencies like Moody's and Standard & Poor's provide investment managers with a guideline and starting point for determining the risk of a bond, managers also form independent opinions on risk, and make investment decisions based on whether they feel they have a good chance of receiving the promised payments.

The easiest way to see this is to consider a junk bond. When a high-risk company (as measured by its credit rating) issues bonds, it must promise a high rate of return to compensate investors for the increased risk. An individual asset manager, however, through analysis of the company and its industry, may believe that the company has a good chance of performing well. The manager would likely then decide that the company's debt is a good investment.

Additional categories

Asset management firms also organize and market funds in categories that we have not discussed. For example, many firms construct funds based on geographic regions. Thus, there are U.S. growth stock funds or emerging market fixed income funds. Firms also market funds based on industries (health care stock funds) and even politics (environment-friendly funds).

Recent developments

Due to the proliferation of alternative investment products (such as hedge funds), traditional asset managers have started to compete with these new styles. The most recent developments are the advent of the long/short and 130/30 funds. Most mutual funds are governed by their specific mandates, which often precludes the manager from shorting stocks (or betting they will decline in value). However, several traditional asset managers (including Hussman Funds and Diamond-Hill Funds, to name a few) have created traditional mutual fund products that enable the portfolio manager to short stocks. The one thing to note about these funds is that while the mandate provides the ability to short-sell, the fund is under no obligation to do so. One analyst working for a long/short product stated "we haven't been short a stock in over a year."

Similar to the long/short fund is the 130/30 fund. This type of mandate stipulates that the portfolio must be 30 percent short, and use those "borrowed" funds, to purchase an additional 30 percent of stocks, making the long position 130 percent. Examples of 130/30 funds include the ING 130/30 Fundamental Research Fund and UBS U.S. Equity Alpha.

Portfolio Construction

All portfolios, whether they are stock or bond portfolios, are compared to benchmarks to gauge their performance; indices or peer group statistics are used to monitor the success of each fund. Standard indices for equity portfolios include the S&P 500, Wilshire 5000, Russell 2000, and the S&P Value and Growth. For bonds, popular benchmarks include the Lehman Aggregate Bond Index and the J.P. Morgan Emerging Market Bond Index. These indices are composed of representative stocks or bonds. They function as a general barometer of the performance of a particular portion of the market they are designed to measure.

As composites, the indices can be thought of as similar to polls: a polling firm that seeks to understand what a certain population thinks about a certain issue will ask representatives of that cross-section of the population. Similarly, a stock or bond benchmark that seeks to measure a certain portion of the market will simply compile the values of representative stocks or bonds.

Portfolio construction refers to the manner in which securities are selected and then weighted in the overall mix of the portfolio with respect to these indices. Portfolio construction is a fairly recent phenomenon, and has been driven by the advent of modern portfolio theory.

Passive investors or index funds

Portfolios that are constructed to mimic the composition of various benchmarks are referred to as index funds. Investors in index funds are classified as passive investors, and investment managers who manage index funds are often called "indexers." These funds are continually tinkered with to ensure that they match the performance of the index. For equities, the S&P 500 is the benchmark that is most commonly indexed.

Active investors

Portfolios that are constructed by consciously selecting securities without reference to the index are referred to as active portfolios. Active portfolios adhere to their own investment discipline, and investment managers actually invest in what they think are the best stocks or bonds. They are then compared, for performance purposes only, to the preselected index that best represents their style. For instance, many large-capitalization active value portfolios are compared to either the S&P 500 Value index or the Russell 1000 Value index. (It is important to note that while active portfolios are still compared to indices, they are not designed specifically to mimic the indices.)

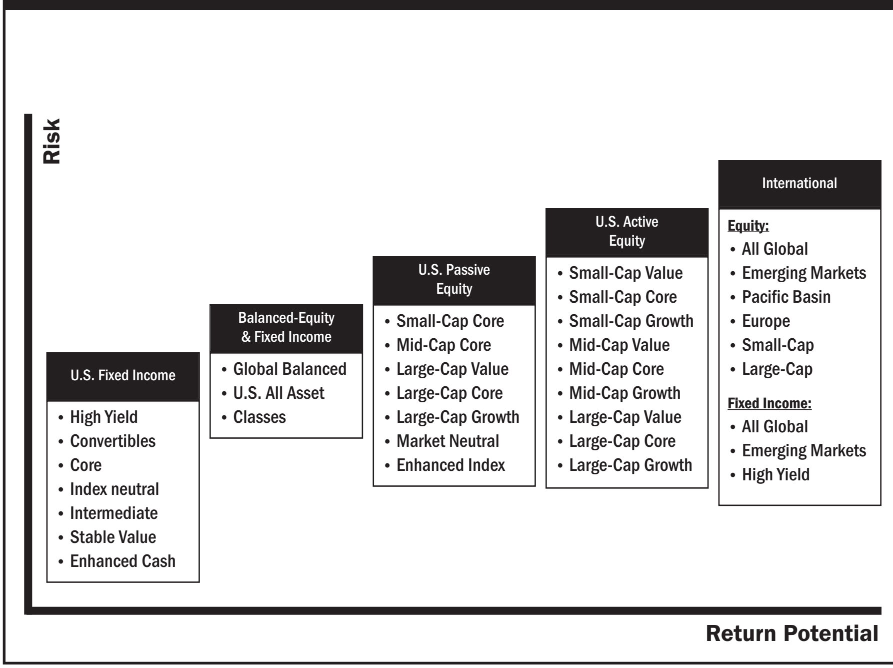
Alternative methods

Variations of active and passive portfolios are present throughout the marketplace. There are enhanced index funds that closely examine the benchmark before making an investment. These portfolios mimic the overall characteristics of the benchmark and make small bets that differentiate the portfolio from its index. Another type of popular portfolio construction method is sector investing. This is essentially a portfolio that is comprised of companies that operate in the same industry. Common sector portfolios include technology, health care, biotechnology and financial services.

Summary of Investment Styles

Ultimately, the various investment styles discussed above translate into various investment products. The chart below summarizes the resulting investment products that are offered by most diversified asset managers. Mutual fund, institutional and high-net-worth investors select the appropriate product that best matches their risk and diversification needs.

Overview of Products – Based on Investment Styles



How Is This Relevant to My Job Search?

If you are beginning your job search in the investment management industry, you need to begin thinking about what investment styles strike you as most interesting. While many of the styles overlap, and being overly specific might limit you, understanding the difference can help in targeting companies you want to work for. For instance, while Barclays is the largest investment manager (measured by assets under management), the firm's assets are primarily in passively managed investment products. If you are more interested in investing in actively managed bond portfolios, then Barclays probably isn't your best bet.

Don't be concerned that your choice of employer will pigeonhole you. While you should try to find a position with a firm whose investment style most interests you, you can always switch gears into a different investment style after you have some experience. Initially, it is best to be in an environment where you can learn about investing in general.

However, when you target your career search, you should be informed of the firm's particular investment style. While large asset managers such as Fidelity and Putnam invest across a multitude of styles, other firms may only specialize in one style, such as Dodge & Cox's focus on value and Janus' focus on growth. It is always important to have the knowledge of these nuances. This will definitely benefit you during interviews—passion and knowledge about the industry always wins valuable points with recruiters.

CAREER GUIDE

GETTING HIRED

INVESTMENT MANAGEMENT

Targeting Your Job Search

CHAPTER 5

Once you understand the different types of firms, components of the business and types of positions available, you can begin to target your search. In this chapter, we'll focus on the different types of firms and their hiring processes.

Where do you fit?

Before embarking on your job search, you must ask yourself the following questions: Do I want to go into equity or fixed income? Am I interested in growth investing or value investing? What investment style suits me? What kind of research do I want to do? What size of firm do I want? Where do want to live? Answering all these questions will not only allow you to narrow down what could be an extremely exhaustive search, but will also help you at interview time—because firms will definitely ask you, "Why us?"

Getting the Interview: On-Campus Recruiting

If you're just graduating college or business school, you might have a chance to interview with the larger asset management companies on campus, but don't expect your search to end there. The number of jobs that these firms offer is very limited, thus landing one of these spots is highly competitive. Additionally, very few of the mid- and small-sized firms recruit actively on campus. In a good year, a top MBA school might have 20 investment management firms—most likely only the largest in the industry—recruiting on campus. In other years, though, the same school might have just a handful recruiting; it's not uncommon that a firm will recruit one year, and not the next. Beyond the top-10 or so asset managers, most firms are relatively unknown to those outside the industry, and there are quite a few of these lesser-known firms. As a result, many job opportunities exist. However, these positions aren't always that easy to locate.

Sell-side

If you are looking at the sell-side, each investment bank will typically have a human resources representative who is specifically in charge of recruiting for various programs such as research, sales and trading, and investment banking. These recruiters are your entry point into the sell-side firms. The best way to meet these recruiters is through "on-campus" presentations. Typically, the larger investment banks will make corporate presentations to juniors/seniors and MBA candidates throughout the year at a "core" list of schools. You can find more detail about these events from your campus career center or by visiting the career section of each bank's web page.

Sell-side research positions are often few in numbers compared to investment banking positions. For example, the recent incoming investment banking program for a major N.Y. investment bank had 100 analysts and 50 associates while the incoming research program had only eight associates and four associate-analysts. Therefore, in some cases, a sell-side firm may send an investment banking recruiter but not a research recruiter to your school. In these cases, it is important to meet the recruiter for the investment banking program. Recruiters within each bank work very closely together and can put you in touch with their counterparts.

Buy-side

Buy-side firms recruit at both the undergraduate and graduate level but are sometimes not as visible as the sell-side firms. The large asset management firms will often make presentations and hold on-campus interviews just as their sell-side counterparts. However, in many cases small asset management firms may send a senior analyst to his alma maters in order to hire a single associate who will directly report to him. Do not discount these firms just because they are small. They often offer very competitive pay packages, balanced work environments and room for promotion.

The Off-Campus Search

What to do if they don't recruit at your school

Ultimately, the investment management job search requires diligence and perseverance. Like any independent job search, your best bet is to schmooze and network. We have found that the best resources include school alumni databases, previous work contacts, family, friends and personal associations.

However, do not hesitate to use cold calls to solicit contact with the firms that interest you. A strong cover letter, exceptional professional and educational background, and persistence often are rewarded with an opportunity to interview with the company.

As expected, investment banks may only recruit at "core" schools, which often include only the top-20 ranked undergraduate and MBA programs. However, you should not get discouraged if you do not attend one of these schools as most banks often leave several positions open to students from non-core schools. If you attend a school that is not a "core" recruiting school, you should try to contact the recruiter directly. E-mail addresses are often listed in the career section on company web pages. While they may appear to be generic (i.e., undergradrecruiting@investmentbank.com), an HR representative often reads the e-mails. Additionally, should you find it difficult to get through to an HR representative, try to find a contact at the specific firm. The best resource for this is your school's alumni directory. Alumni are often willing to help current students and put them directly in touch with the appropriate HR representative in order to avoid the "red tape."

CFA Institute

Another resource is the CFA Institute (formerly known as the Association for Investment Management and Research), headquartered in Charlottesville, Va. The CFA Institute is an association of 95,000 investment professionals and educators in over 130 countries. The organization holds seminars on investment management topics, oversees the CFA exam, offers continuing education courses and hosts social events. CFA Institute member chapters in larger cities, such as New York and Boston, meet frequently, often once a week. Chapters in smaller cities meet less often. Students can often attend CFA Institute meetings, which require a fee, to network and learn more about the industry. For more information on the CFA Institute, including its newsletters and various publications such as *Financial Analyst Journal*, check out the association's web site, www.cfainstitute.org.

Additionally, the CFA Institute web site has a job boards section, which is very helpful if you are conducting a national career search. However, if you are focused on a particular region, you will want to find the web site for the local CFA society. This can help you target your job search. For example the New York Society of Security Analysis (www.nyssa.org) has a detailed career section. While NYSSA is the local society for CFA charter holders and candidates in the New York City area, they also offer student memberships (currently offered at $60). These memberships often give you access to the web site's job boards.

Finally, a great way to target your job search is to review the list of the top-300 asset managers and target those in your preferred region. Oftentimes, you can find an HR contact listed on the web pages of these asset managers. Several magazines publish annual lists of the largest money managers. A current list of the largest 300 asset managers from *II Magazine* can be found at www.iimagazinerankings.com/ii300/index.asp.

What they want

Because it's difficult for MBAs, and even more difficult for undergrads, to enter asset management through the front door, several slide into the industry through the side. Although there's no common professional background that defines asset management success (and, in fact, diverse backgrounds are great benefits to investment management companies), lateral hires typically come from jobs in I-banking or management consulting, or from respected Fortune 500 corporations such as GE or Johnson & Johnson.

In investment banking and accounting you'll gain quantitative knowledge such as company valuation and financial statement analysis similar to that used in asset management. Investment managers also like candidates with management consulting—especially strategic consulting—backgrounds, because consultants usually have obtained the skill to quickly immerse themselves in and learn about an industry. Marketing research professionals from large corporations are also highly regarded in asset management, because they have expertise in learning about different companies and how they compete in the marketplace.

Who are the Asset Management Employers? A Basic Breakdown

Who are the players? In order to figure out where you fit in the investment management world, you have to figure out what your options are. In this section, we will discuss the differences between the two general categories of investment management firms: large generalist firms and specialist firms.

Large generalist firms

As we discussed earlier, the industry has gone through dramatic changes over the last 20 years. Consolidation and the focus on globalization have transformed the industry from its fragmented "specialist" structure. Today, asset management is part of nearly every financial services firm, both in the U.S. and abroad. For the sake of simplicity, we have assigned asset managers to five general categories, and listed a few examples in each platform.

Category	Examples
Pure Investment Management Company	Fidelity, Capital Group, T. Rowe Price
Divisions of Investment Bank	Morgan Stanley Asset Management, JP Morgan Asset Management
Divisions of Global Commercial Bank	Citigroup, Barclays
Divisions of Domestic Commercial Bank	Mellon, Northern Trust
Divisions of Insurance Company	AIG

As you can see, most of the large investment management firms are actually divisions of broader financial services companies. However, in many cases, the asset management divisions are run as entirely separate autonomous entities. In other cases, the parent predicates the culture and focus of the business. As you explore career options in the industry, do your homework about the firm's structure and understand how the division operates.

Specialist firms

While the industry has shifted somewhat away from specialist firms, their role continues to be in demand because of the specific expertise they can provide. Today, there are nearly 500 firms that manage between \$1 billion and \$30 billion. These firms are located throughout the country and usually have relatively smaller staffs and vastly different cultures. Below, we have included a small sampling of "specialists" with a variety of investment focuses.

Specialist Firms	Location	AUM as of 12/31/06 ($ billions)	Investment Focus
Grantham, Mayo, Van Otterloo and Co.	Boston, MA	$141	International Equity
Loomis Sayles	Boston, MA	$97	Growth and Value Equity
PRIMECAP	Pasadena, CA	$61	Growth Equity
Payden & Rygel	Los Angeles, CA	$54	Fixed Income
Oaktree Capital Management	Los Angeles, CA	$36	Distressed Debt
Third Avenue	New York, NY	$26	Value Equity
Wasatch Funds	Salt Lake City, UT	$9	Small Cap Equity

Source: Institutional Investor

Generally, the smaller firms do not actively recruit. This means it's up to you to target each firm, research its specialty and contact them directly. A great resource is *Institutional Investor*'s annual ranking of the top-300 money managers and *Pension & Investments* magazine's puts out a similar ranking each year. Additionally, *Nelson's Investment Guide* lists investment managers by state and asset classes, and provides telephone numbers and e-mail addresses.

A Closer Look: Hiring Process, Uppers and Downers

The investment industry is a vast one, encompassing thousands of firms and tens of thousands of investment groups within corporations, unions, foundations, schools and government institutions. How can you determine whether a particular firm is the right one for you to join? First, you must understand the kinds of firms within the business and how they tend to hire.

Tier 1 complexes

Tier 1 complexes are mutual fund families that offer a complete or nearly complete range of products. They serve significant numbers of retail, institutional and high-net-worth customers, and will have at least $100 billion under management. These firms are well known throughout the industry.

Examples

- Fidelity
- Franklin Templeton
- T. Rowe Price
- MFS
- Capital Group
- PIMCO

Hiring

These firms hire almost exclusively through recruiting at top MBA programs or raiding other Tier 1 or Tier 2 firms. Some will hire BA candidates, but generally only from a top school. Inexperienced hires will be brought on as research assistants/associates (if without a graduate degree) or as junior research analysts (with graduate degree).

Uppers

- Exit opportunities, both at graduate schools and within the industry
- High pay
- Superior access to companies and sell-side analysts
- Firm's diverse product lines insulate against downturn in your industry

Downers

- Bureaucracy
- Internal politics
- Extensive travel required

Top-tier boutiques

Top-tier boutiques are firms that specialize in a particular flavor of instrument, industry sector or style. They are nationally or internationally recognized for their expertise in that specialty. A top-tier boutique will have between $5 billion to $100 billion under management.

Examples

- Real Estate—Cohen & Steers, Alpine
- Fixed Income—Ares, Payden & Rygel
- Value—NWQ, Brandes

Hiring

Top-tier boutiques hire in a similar fashion to gold-plated megaplexes. However, if their specialty is currently out of favor, an especially persistent but atypical candidate can sometimes obtain a position at a top-tier boutique.

Uppers

- Exit opportunities, both at graduate schools and within the industry
- Superior access to companies and sell-side analysts
- High pay

Downers

- Occasional lack of support staff
- Extensive travel required

Tier 2 complexes

Tier 2 complexes are large fund complexes that have a complete or nearly complete product line. However, they are not regarded as highly as Tier 1 complexes or top-tier boutiques. They will often be attached to a bank (whether commercial or investment), insurance company or other financial conglomerate. Tier 2 megaplexes will serve mainly retail and high-net-worth clients.

Examples

- RiverSource Investments
- Raymond James Financial
- SunTrust

Hiring

Tier 2 complexes are often scattered in their hiring—hiring internally, recruiting at the undergraduate level at local universities, and at the graduate level at both local and top-20 universities.

Uppers

- Superior access to companies and sell-side analysts
- Firm's diverse product lines insulate against downturn in your industry
- Good pay

Downers

- Bureaucracy

- Internal politics
- Extensive travel required

Old-line firms

Old-line firms are firms that often were started in the 1930s (or even before). They are generally value/fixed income shops and focus on capital preservation. They will have a mix of old-money, very high-net-worth clients and local institutions.

Examples

- Dodge & Cox
- Loomis Sayles
- Third Avenue

Hiring

OLFs hire at top-10/15 MBA programs. Occasionally, they may also hire laterals from other (value-oriented) firms that are also located in the same city.

Uppers

Exit opportunities, both at graduate schools and within the industry

- Superior access to companies and sell-side analysts
- Good pay
- Stable firms, positive (though conservative) cultures

Downers

- Bureaucracy
- Firm's stodgy philosophy may not appeal to you
- Firm expects you to stay with them for many years and structures pay and advancement accordingly

Universities, foundations and pension plans

These are (generally) tax-exempt pools of money. In most cases, the great majority of assets is outsourced to various outside top firms. The investment staff at these institutions selects and monitors these outside managers. Small portions of the assets can be managed internally.

Examples

- Yale Endowment
- CalPERS
- GM Pension Fund

Hiring

The top-tier institutions prefer to hire recent MBA graduates who have spent a number of years (post-MBA) at a premier buy-side or sell-side firm, but who would like to reduce their working hours.

Uppers

- Exit opportunities, both at graduate schools and within the industry
- High job security
- Great benefits
- Less stressful environment and culture

Downers

- Bureaucracy
- Focus on asset allocation and monitoring, not in-house management
- Relatively low pay
- Difficult to get active management jobs due to lack of experience

Insurance companies

Insurance companies often manage extraordinarily large sums of money. This money is derived from policy payments and set aside against potential claims. Insurance companies have historically invested mainly in high-grade, fixed income instruments.

Examples

- AIG
- New York Life

Hiring

Insurance companies generally hire investment staff from local universities. Historically, insurance companies have been unable to attract many candidates of top-20 MBA programs. Insurance firms will hire at both the MBA and BA levels.

Uppers

- High job security
- Great benefits
- Less stressful environment and culture
- Willing to hire non-Ivy candidates
- Good learning environment

Downers

- Bureaucracy
- Focus on high-grade fixed income
- Low pay
- Low prestige
- Extremely conservative investment styles

Hedge funds

Five years ago, obtaining a job at a hedge fund would have required navigating through a labyrinth of networks and connections to meet the right people. However, as hedge funds have become much larger, recruiting has become more formal and closely tracks a similar process to mutual funds and investment advisory firms. Hedge fund jobs are not necessarily more prestigious than other opportunities available. More important, the industry generally does not truly distinguish between a hedge fund specializing in, say, energy and a mutual fund that does so. Each fund will be judged according to performance, size, reputation and quality of personnel. Below is a list of large hedge funds:

Firms	Location	AUM's as of 12/31/07 ($ billions)
JP Morgan Asset Management	New York, NY	$33
Goldman Sachs Asset Management	New York, NY	$33
Bridgewater Associates	Westport, CT	$30
D.E. Shaw Group	New York, NY	$27
Farallon Capital	San Francisco, CA	$27
Renaissance Technologies	East Setauket, NY	$26
Och-Ziff Capital	New York, NY	$21
Barclays Global Investors	London, UK	$19
Man Investments	London, UK	$19
ESL Investments	Greenwich, CT	$18

Source: Alpha Magazine

How Do You Know if the Firm is Right for You?

Unlike most other industries, the investment management industry encompasses literally thousands of firms, most of which either do not advertise themselves or are even legally barred from doing so (hedge funds, for example). Much of the time, you are dealing with a job search in which your potential future employers are unknown entities to you. In this section, we'll discuss the most important questions you should ask and what sources and criteria you should use when evaluating a potential employer.

Who works there?

One of the most helpful portions of an investment management firm's web site is the staff bio section. This is the premier consideration in evaluating a firm. If the staff is good, you will likely have, at minimum, a reasonable experience there. If the staff is weak or poor, you will likely have a subpar experience there.

How to evaluate staff bios: Two things to look at are the staff's experience and education. At minimum, all principals should have significant experience at top, recognizable buy-side or sell-side operations. Also, most or all of the principals should have degrees (both undergraduate and graduate) from top universities. If some of the principals have non-buy-side experience, it should be at a recognized company or institution. Most of the firm's analysts should have similar backgrounds as well (though, obviously, less experience in terms of years and positions held).

Big warning signs include: 1. None (or few) of the principals has significant experience at a top firm. 2. None (or few) of the principals has a graduate degree from a top university. 3. Analysts have weak academic and/or work backgrounds. No full analyst should have less than three years of experience. 4. Any signs of nepotism. 5. Lists of degrees from unrecognizable universities and/or work experience at unrecognizable firms. 6. Missing periods in bios.

How much money do they manage?

Assets under management: If the firm's web site does not tell you how much money the firm manages, this information should be obtainable at either the

Nelson's Directory of Investment Managers or *Institutional Investor* and *Pensions & Investments* web sites. If the firm is not in either resource, this is also a warning sign. For a hedge fund, $200 million under management is a good general mark of a fund with a healthy amount of money under management. For regular buy-side firms, firms with significantly less than $500 million should be viewed cautiously.

The investment management business is one where you derive your profits from the amount of money you manage. Hedge funds also gain a portion of the profits they achieve. Any good manager with significant experience at a top firm can walk out the door with commitments of, at minimum, $100 million. Some have walked out with commitments of $500 million to $1 billion. Therefore, a firm that cannot break the $200 million figure just does not have the right staff needed to be able to compete.

Whose money are they managing?

You want to join the smartest firm you can. How can you tell whether a firm is smart and will be able to grow? Evaluate the firm's clientele. The smartest clients in the business are the university endowments, large foundations, certain smart corporate pension plans, the sharper state pension plans (especially CalPERS, Ohio State Board of Investments, Wisconsin and Virginia), and some funds of funds (a mutual or hedge fund that invests in other mutual or hedge funds). Not only do these institutions have fine internal staffs with large budgets to investigate potential managers, but they are advised by numerous consulting firms that also research money managers. Not only will these institutions generally select top-rate managers but, if these managers perform, the institutions have much larger amounts to give them. It is a serious negative if the firm has not been able to attract any of these investors. It means either the staff does not have the level of experience and education to gain these institutions' trust, or their product and/or investment strategies are unappealing, ill formed or incomprehensible.

The remaining potential client bases are retail and high-net-worth (HNW) investors. Those with retail investment clientele run mutual funds; those that cater to HNW individuals run individual accounts.

How do you find out about the firm's clientele? Ask them, then check their answers against both *Nelson's* and *Pensions & Investments* and search the Internet for manager announcements (when a public pension plan puts money with a new manager, this information is published).

You should target firms that best fit your ideal working environment. The best resources for learning this information are company web sites and through networking with employees of the respective firms. (For more information, check out Vault's insider company profiles and message boards.)

The Interview

CHAPTER 6

As we have discussed, the investment management industry can be difficult to break into. Landing your dream internship or job in this industry is usually more difficult than getting an investment banking job. Positions are limited, the compensation is exceptional, the hours are manageable, the competition is fierce, and most people never leave their positions—all of which provide a career that many candidates desire.

Aside from understanding the industry and firms, cracking the interview is the most important step in landing your dream job. In this chapter we will explore the most common questions asked of candidates during job interviews. We have segmented the questions into three types: background, analytical/quantitative and personality/fit.

Getting Ready

Precursor to the interview

The first basic tenet for anyone seeking to enter the investment management industry is a fluid understanding of the financial markets. You should be able conversant about the market's performance and current drivers (such as growth stocks outperforming value stocks in 2007 and oil hitting $100 per barrel in 2008). From a very simplistic level, you should be able to answer the following questions:

- At what level is the S&P 500?
- What was the return of the Dow last year?
- What has performed better over the last five years, value or growth stocks?
- Where is the price of gold and oil?
- What factors drove the market to increase or decrease in a particular day?

For specialty firms, your focus should be aligned with the firm's strategy. For example, if you were interviewing at a firm focused on international equities, general knowledge of current exchange rates would be a requirement. The answers to these questions can be found by reading *The Wall Street Journal* on a regular basis or visiting financial web sites.

Preparing for the interview

It is common for candidates to underestimate the importance of preparation for an interview. Interviewers are smart, well prepared and likely to be interviewing many candidates for very few positions. Investment managers are very picky about the people they hire. It is not uncommon to have very senior portfolio managers or analysts conduct first round interviews. Therefore, the time spent getting ready for the interview may separate the candidates that get the job from those that get the "ding."

The place to start is getting to know the company. Do your research on the firm's history, business strategy, operating structure and financial performance. You do not need to have contacts at the company to gather this information. Some great resources include: company websites, company annual reports, sell-side analyst reports, business newspapers and magazines, and industry publications such as *Institutional Investor*, *Pensions & Investments*, *Bloomberg* magazine and *The Journal of Portfolio Management.* In addition, check out *Nelson's Directory of Investment Managers* or *Nelson's Directory of Investment Research,* both of which are thick reference books to firms in the industry found in most school libraries. Articulating to the interviewer that you know about the company helps to exhibit your passion about the position and diligence in your preparation.

Next, you need to plan how to position yourself during the interview. Think of an interview as a sales presentation and the product you are marketing is yourself. You need to establish the critical points of your background and character that will make you the ideal candidate for the job. In doing this we suggest the following:

- Know every detail on your resume.
- Prepare answers to the common questions detailed in the following pages.
- Expect the unexpected.
- Practice repeatedly.

In an interview, nothing should surprise you. We'll spend the rest of this chapter discussing common interview questions and answers.

Background Questions

What was your most significant accomplishment to date?

It is important when answering this question to focus on an accomplishment that highlights the skills needed to be successful in the specific position you are applying for. For instance, when interviewing for an investment research associate or analyst position it is important to mention an accomplishment that required keen quantitative skills, problem-solving ability and success as a team member. Be sure when answering this question that you provide tangible and measurable results to your accomplishment. For example, "… as a result, the company increased revenue by 10 percent," or "… as a result, the portfolio's performance exceeded its benchmark."

Tell me about a recent professional experience when you had to convince someone to accept your idea.

The interviewer wants to know how effective you are at articulating your recommendations and defending your opinions. This is an important part of being an investment professional. A great way to answer this question is to state whom you were trying to convince and why they opposed your point of view. Then highlight how you overcame this. For example, "… I supported my analysis by outlining and measuring the potential risks associated with the project. By clearly comparing the strengths and the weaknesses of the project, my boss saw the merit of investing in the business." Finish the example with the measurable and tangible results of your actions.

What was the most important thing you learned in your last job and why did you leave?

For those just graduating school this question is less likely, but for others it is a common question. When answering this question be positive, even if the story did not end happily. Think about how you can link the skills learned in your last job, to the relevant talents needed in the new desired position.

Why are you interested in the "buy-side" instead of the "sell-side?"

This question is often asked to gauge your knowledge of the differences between the two sides of the business. Most interviewers are not looking for a specific answer, but rather a reasonable rationale. Acceptable answers might include references to closer interaction with portfolio managers, more input into the investment decisions, and dedicated focus on performing investment analysis (instead of marketing and writing investment reports).

Stock and Bond Recommendations and Valuation Questions

The level of difficulty of analytical interview questions depends on the level of position you are interviewing for. Analytical questions will generally be about stock recommendations and valuation, the economy or financial accounting. Anyone above the assistant level should be prepared to defend his or her knowledge of these aspects of financial analysis.

How do you go about valuing a company?

There are two generally acceptable answers to this question. One is using a discounted cash flow (DCF) approach and the other is to use a comparable financial multiple analysis. Be sure you know the differences between each and why most analysts don't use a DCF approach in valuing companies. Mainly, they argue that it is very difficult to predict accurate discount rates and terminal values for the company. (In the next section we will outline these two ways of valuing companies.)

Analysts compare their own valuation of a company to the current stock market valuation. If analysts' valuation of the company is greater than the stock market value, then they would typically recommend its purchase. Industry analysts typically use a relative valuation approach. This approach compares multiples, such as P/E and EV/EBITDA, amongst companies in the same industry. Industry analysts use relative valuation to determine which stocks in an industry appear cheap or expensive, relative to each other.

Tell me about a stock that you think would be a good investment today.

This question is known as the "stock pitch." You should be prepared to discuss at least one stock during the interview. For those of you interviewing at traditional asset managers, it will likely be a stock pick that you expect to perform well over the long run. However, if you are interviewing at a hedge fund, you may be asked to pitch a stock that will perform well over the next quarter or two; you may also even be asked to pitch a short-idea (a stock you expect to decline).

The interviewer is not interested in your investment opinion, but rather your ability to present a well-organized approach. The interviewer, most likely, will want you to keep your stock pitch brief (five minutes). Therefore, hit the highlights quickly and focus on being persuasive. Oftentimes, the interviewer will let you present for several minutes and then interject with questions along the way. The steps listed below will assist in preparing a well-articulated thesis for any company.

1) Overview of the company and its competitive position.

- Identify major products and highlight their current market share and growth rates (this also includes market cap and revenue to provide the interviewer some background information).
- Competitive advantages (i.e., brand equity, first to market, strong management team, substantial free cash flow, innovative product development, strong customer service).

2) Industry analysis.

- Number of competitors.
- Growth of the market—impact of external factors such as the economy and customer demand.

3) Analysis of the company's future prospects (new products, etc.)

- Analyze management's growth strategy.
- Identify business drivers.
- Does the company have the correct product mix to match future customer demand?
- Will earnings grow through cost controls, price increases or unit sales increase?

4) Investment risks—it is important to quantify the things that can go wrong when determining a proper value for the company.

- Sensitivity to macroeconomic conditions.
- Management succession.
- Regulatory changes.
- Changing operating input prices.

5) Recent financial performance—stocks go up and down based on their performance vs. expectations. For instance, if investors expect 25 percent earnings growth and the company only produces 23 percent the stock price will most likely fall.

- Highlight company earnings and sales growth vs. the industry and expectations.
- Measure the progress of operating margins.
- Indicate market share gains.
- Identify any aspects that differentiate your opinion from the market's (ie. if sell-side analysts expect EPS growth of 10 percent and you expect 20 percent, say why).

6) Financial valuation of the company (relative to industry comparables).

- Please see the "valuing a company" section of this book.
- Steps one through five are incorporated into the financial predictions used for valuing the company.

7) Summarize your investment recommendation

Submitting a written stock pitch

Some companies may ask for a full written investment report, so preparing this type of analysis in a written version may be a good idea. The key to note is that this is not a consulting project or a company bibliography. The stock pitch should be concise and to the point, hitting only the key drivers that will dictate future stock performance. Whenever you can, quantify any points you are making. For example, instead of stating that a company's competitive advantage is the patent protection of its product mix, you should state that 75 percent of all products sold carry a patent that prevents competition.

A client in the 28 percent tax bracket has a choice between a tax-free municipal bond yielding 7 percent and a corporate bond yielding 8.5 percent. Which should he choose? What would the yield on the corporate bond have to be in order to be equivalent to the tax-free bond?

You have to compare the instruments on the same basis in order to decide. Since the muni bond is tax-free, you have to find the after-tax yield of the corporate bond and compare that with the muni.

Take the corporate bond first and consider a one-year period for simplicity. Suppose the client invested $1,000 and earned 8.5 percent. Of this, 28 percent will be taxed, so the client's gain is (1-t)y$1000 = (1-0.28)0.085*$1,000 = 61.2. This is equivalent to a tax-free yield of 6.12 percent. So, since the yield of the tax-free bond is greater than the after-tax yield of the corporate bond, the client should choose the muni.

To determine the yield that will give parity between the corporate bond and the muni bond, use the formula "after tax yield on corporate = tax free rate" or, (1-t)ycorp = ytax-free, then ycorp =ytax-free/(1-t). For this example, the yield on the corporate bond would have to be 0.07/(1-0.28) = 9.722 percent in order to be equivalent to the tax-free bond. If corporate bond yields are lower than 9.722 percent, choose the muni; otherwise, choose the corporate bond since the higher yield will offset the cost of the tax.

What would be a good instrument to use to hedge a portfolio of preferred stock?

Since preferred stock is similar to bonds that never mature (perpetual bonds), the best hedging instrument would be a long-maturity, risk-free instrument such as a T-bond option based on long-term treasuries.

If you are buying corporate bonds, which is more speculative: A, Aa, Baa or B?

B is the most speculative of these ratings.

If a client purchases a 6 percent, $1,000 bond selling at a yield to maturity of 7 percent, what is the amount of the semiannual interest payment?

Yield is unimportant here. It is the coupon payment, 6 percent of $1,000 each year is $60 or $30 every six months. Don't get confused if the interviewer adds extra information to the question.

How can you reduce the risk of a portfolio?

You add instruments for diversification. Hopefully these instruments are not well correlated with each other, so overall they reduce risk. For equities, theoretically, you need about 30 different stocks for efficient diversification. There are many forms of risk: credit risk, liquidity risk, country risk, market risk, firm-specific risk and so on. You can also include hedging instruments: for example, if you own a particular equity, you could buy put options on it.

What is a warrant? Do warrants affect a firm's financial ratios such as ROE?

A warrant is a security similar to a call option on a stock, except a warrant usually has a longer life (time until it expires) than a call. Warrants may often be attached to issues of preferred stock or bonds in order to make the issue more attractive to investors, because warrants offer the opportunity for some participation in stock appreciation. When the warrant is exercised, the owner pays the stated strike price in exchange for new shares of common stock. All other things equal, whenever a company's number of common shares outstanding increases, measures such as ROE and EPS should decrease, because shareholders' ownership is diluted.

Economic Questions

What economic indicators do you think have the greatest impact on the stock/bond markets?

There are many good answers to this question, but the best approach is to discuss economic factors that are currently impacting the market. The interviewer wants to know that you are well informed to current market dynamics.

You should read several leading financial periodicals prior to any interview, such as *The Wall Street Journal*, the *Financial Times*, *The Economist* and *BusinessWeek*. Articles in these magazines will provide you with the current economic influences on the market.

In general, you should know that investment analysts pay close attention to weekly, monthly and quarterly economic reports. Announcements of these economic indicators have major impact on equity and bond market performance. The most heavily watched economic reports include:

- **Consumer price index**—measures inflation.
- **Unemployment**—company labor costs and profitability are driven by the level of employment in the market.
- **Gross Domestic Product (GDP)**—measures the growth of the entire domestic economy. Analysts use GDP to forecast the sales levels and profitability growth rates of companies.
- **Unit labor costs**—measures the productivity level of workers.
- **Fed funds rate**—the rate set by the Fed for banks to borrow and lend money to the government. When the Fed cuts rates they are signaling a weak economy and are trying to stimulate borrowing and spending. When the Fed raises rates they are trying to slow the economy by inducing people to save. The Fed is constantly trying to keep the economy from being too hot or too cold.

Well-prepared interviewees will know the current level, past trends and future expectations of each of these indicators.

Discuss the trends in the industry that you previously worked in.

This question is designed to gauge your ability to think strategically. In essence, the interviewer is asking, can you identify the:

- Strengths and weaknesses of the industry
- Level of competition
- Regulatory changes
- Impact of economic changes
- New innovations
- Industry threats

The key points of this exercise are usually summed up in a SWOT analysis, which breaks down a company's strengths, weaknesses, opportunities and threats.

Financial Accounting Questions

What is free cash flow?

It measures the cash available after adjusting for capital expenditures. Popular uses of free cash flow are dividends, stock buybacks, acquisitions and investing in new business developments.

Free cash flow is computed from the following financial statement line items:

Net Income
+ Depreciation and amortization
+ Year-over-year changes in deferred taxes
- Year-over-year change in net working capital (current assets - current liabilities)
= Cash Flow from Operations
- Capital Expenditures
= Free Cash Flow

How do you calculate WACC (weighted average cost of capital)?

Essentially, it is the average cost of obtaining capital from all sources of financing (debt and equity stakeholders). Before determining the weighted average, you must first determine the borrowing rate of each form of financing. Equity cost of capital is found by using CAPM, which is computed as follows:

Cost of Equity = Rf + [B*(Rm - Rf)]

Where:

Rf = Risk Free Rate of the market (T-bills)

B = Beta of the stock

Rm = Historical stock market return

Debt cost of capital (current yield) is often estimated as the company's after-tax interest expense divided by its book value of long-term debt.

Once the cost of equity and debt are computed, a weighted average is used to determine the company's WACC. The company's market capitalization is used for the equity portion, while the market value of the company's bonds is used for the debt allocation.

For example, assume that the company's cost of equity was computed as 14 percent (using CAPM), the cost of debt was computed as 9 percent, and the tax rate is 35 percent. And assume that the stock market valuation of the company was $10 billion and the market value of the debt was $5 billion. Therefore, the percentage of equity financing would be equal to [$10 billion/($10 billion + $5 billion)], or 66.7 percent. Debt financing would account for 33.3 percent of the overall financing, [$5 billion/($10 billion + $5 billion)]. Therefore the WACC is:

WACC = [Weight of Equity * Cost of Equity] +
[Weight of Debt * After-Tax Cost of Debt]

or

WACC = [66.7% * 14%] + [33.3% * 9%*(1-.35)] = $\boxed{\text{11.28\%}}$

Personality/Fit Questions

Where do you see yourself in five years?

This question is designed to test the career focus of candidates. When answering this question be certain to have reasonable goals that are well aligned with the firm you are interviewing with. For example, if you were interviewing with a firm that emphasizes a team portfolio management process, you would not want to describe your aspirations for being a star at the firm. You should also note that many traditional asset managers hire lifelong employees. If you are a career switcher or your resume shows multiple jobs, be prepared to show commitment to your future career.

What is your greatest reservation about working in asset management?

This is one of those negative questions that you have to be very careful in answering. In essence, the interviewer is asking for your weaknesses. Be certain that your answer does not highlight a fundamental flaw that would be detrimental to your success in the position you are interviewing for. For example, "… I am not really good with numbers" or "I don't ever want to work on the weekends."

What are you most proud of?

This is a great place to talk about extracurricular activities or personal interests. This helps the interviewer get to know you better. Be prepared to share interesting anecdotes that show a passion for the activities you have pursued. This is also a great place to highlight your abilities as a leader.

CAREER GUIDE

ON THE JOB

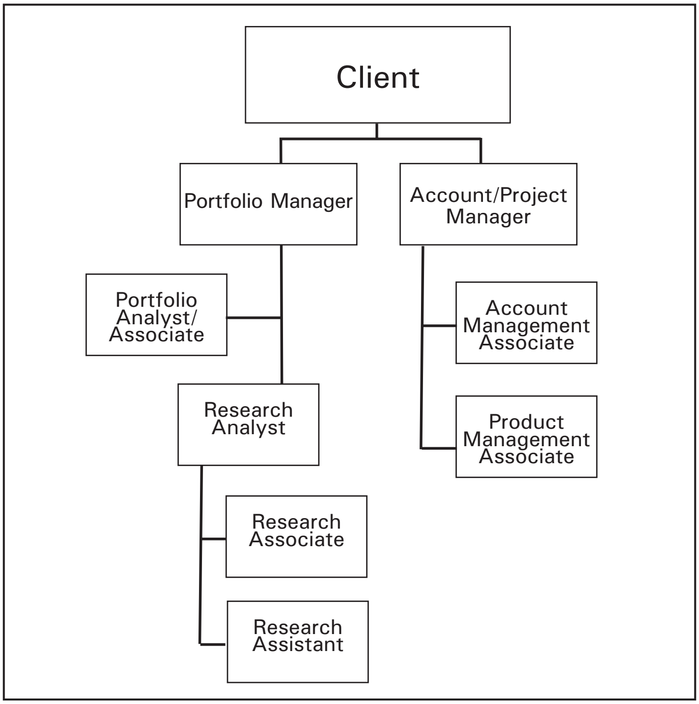
INVESTMENT MANAGEMENT

Portfolio Management

CHAPTER 7

The three segments

As we discussed in Chapter 1, asset management firms are organized into three segments: portfolio management, investment research and account/product management (marketing/sales). Below is a diagram that explains this structure.



As you can see from the diagram, both portfolio management as well as account/product management serve the client (whether they be individuals, institutions or high-net-worth investors). Alternatively, investment research falls under portfolio management, indicating its support of the investment process. While this represents a traditional hierarchy, asset managers can have varying structures. In many cases, the research analyst can also report directly to the client if he/she has money management responsibilities. An example of this would be Fidelity's "Select" funds in which the industry analysts manage money directly in their industries of expertise. In this chapter, we will discuss portfolio management and how it relates to the other segments.

What does portfolio management do?

The portfolio management segment of the firm makes the ultimate investment decision; it's the department that "pulls the trigger." There are three jobs that typically fall under this component of the firm: portfolio managers, associate portfolio managers and portfolio analysts. Recent college graduates often fill portfolio analyst positions, while individuals with many years of investment experience hold associate and senior portfolio manager assignments. MBAs are not hired as portfolio managers right out of business school, unless they have a ton of experience. Typically, MBAs who wish to pursue a career in portfolio management join investment management firms in their investment research divisions. After several years in research, MBAs will then have a choice: either stay in research or leverage their research experience to move into an associate portfolio manager position or broaden their experience by covering additional sectors.

Senior Portfolio Manager

Portfolio managers are responsible for establishing an investment strategy, selecting appropriate investments and allocating each investment properly. All day long, portfolio managers are presented with investment ideas from internal Buy-side analysts and Sell-side analysts from investment banks. It is their job to sift through the relevant information and use their judgment to buy and sell securities. Throughout each day, they read reports, talk to company managers, and monitor industry and economic trends looking for the right company and time to invest the portfolio's capital.

Setting portfolio style and diversity

The selection of investments must adhere to the style of the portfolio. For instance, a large-capitalization growth manager might be screening for only companies that have a market-capitalization in excess of $10 billion and earnings growth characteristics that exceed its industry average. Therefore, the portfolio manager would not even consider a $500 million utility stock, with a 6 percent dividend yield.

Once investment opportunities are recognized, portfolio managers must decide what percentage of their portfolio to allocate to the respective security. This decision is based on the mandate of the portfolio—active or passive—and the risk expectation of the overall portfolio. For example, riskier portfolios invest in a small number of securities and take large "bets." The popular Janus Twenty fund invests in only 20 liquid large-capitalization companies. These are often referred to as "concentrated" funds. Alternatively, diversified portfolios may invest in over 100 securities to spread the risk of any one holding.

Working with clients

Portfolio managers also spend time meeting with their clients to review investment strategy and performance results. While account and product management professionals lead this process, portfolio managers are often an integral part of client discussions. In the mutual fund world, portfolio managers do not spend time talking to individual customers, but they are often called on to present at sales conferences and at product road shows. However, institutional and high-net-worth portfolio managers have fewer clients, and they only meet with them one to two times a year.

Education and experience

Portfolio managers are the most seasoned investment professionals in the firm. Typically, people with at least seven to 10 years of investment experience occupy these positions, and most have either an MBA and/or a CFA designation.

Associate Portfolio Manager

Job responsibilities

The associate portfolio manager position requires an MBA, CFA or considerable investment experience. Typically, the job is filled by successful research analysts who have at least three to five years of post-MBA experience. Larger firms may also recruit MBAs to fit this role straight out of business school. The job itself is very similar to that of the senior portfolio manager with one main exception: associates interact less with clients than senior managers do. Associate portfolio managers usually are assigned smaller, less sophisticated portfolios to manage or serve as lieutenants on large, complicated portfolios.

The role of the associate portfolio manager differs depending on which segment of the market is being served—mutual fund, institutional, or high-net-worth. For instance, associate portfolio managers at many mutual fund firms will either act as the lead investor on a sector fund or as second-in-command on a large diversified fund. Depending on the firm, an associate could also act as a lead on a sector fund and a second-in-command on a diversified fund at the same time. Alternatively, on the institutional side, associate portfolio managers typically apprentice with seasoned portfolio managers on the largest and most complicated portfolios. After they have succeeded in that role, the firm will assign them smaller institutional accounts to manage on their own.

Career track

While there is no defined career track, successful associate portfolio managers could be promoted to senior portfolio managers within three to five years depending on the associate's track record.

Uppers	Downers
• Great spot to showcase your investment talent • Clearest path to running the big-time portfolios • Autonomy and creative independence	• Always being graded on your investment decisions • Competitive, high level of scrutiny • Limited client interaction • High degree of focus, smaller accounts or sector funds

Portfolio Manager Analyst

In general, portfolio manager analysts (or portfolio analysts) screen for potential investments, monitor portfolio characteristics, and assist in client relations. Recent college graduates will typically spend two to four years in this role before returning to business school or migrating to a role in the investment research department.

What do analysts do?

This position varies among the firms in the industry, and the role itself differs depending on which segment of the firm you work in—mutual fund, institutional or high-net-worth. For instance, high-net worth portfolio analysts spend more time working with clients, while institutional analysts spend more time monitoring and analyzing portfolios. Regardless, the general assignment focuses on supporting the portfolio manager.

Portfolio manager analysts are often instrumental in the process of screening for potential investments. Using the general strategy of the investment product—such as market-capitalization, earnings growth, valuation multiples or industry—the analyst screens all available stocks in the market to identify the smaller list that meets the portfolio's criteria. The screened list, for an active portfolio, varies but typically ranges between 100 and 300 securities. Portfolio manager analysts then gather additional research for the portfolio manager to begin the process of fundamentally analyzing the potential investment.

Once investments are made, portfolio manager analysts are responsible for monitoring the reconciliation of the trades. In this role, they work with the operations staff to assure that the portfolio is properly updated and performance records are accurate. Most firms have separate operations departments that reconcile trades and produce monthly client reports. However, many of the smaller firms require their portfolio analysts to perform the operations function as well. You should be aware of this, and clarify the exact job responsibilities when applying and interviewing for the job.

Portfolio analysts also participate in the process of client service, although the proportion of time spent in this area depends on the client type being served. For instance, an analyst to a mutual fund portfolio manager would spend very little time on client service. Institutional and high-net-worth portfolio managers have fewer clients and they meet with them one to two times a year. Intermittently, their clients require vast and detailed investment reports and market commentaries. While marketing helps prepare these formal presentations, the portfolio manager analyst plays a crucial role in collecting economic and market data for investment commentary and portfolio analysis sections of the report.

The position requires a person who understands capital markets, is capable of meeting deadlines and enjoys working on multiple projects simultaneously. The downside is that the reporting and operational components of the job have a quick learning curve and then become repetitive. Furthermore, it is not the best place to learn how to really value companies. Rather, you are being exposed to the years of experience that the portfolio manager possesses. Most important, portfolio manager analysts receive the benefit of seeing a broad picture of investing money across several industries, whereas research analysts typically get exposure to one component or sector. All in all, in the right setting, the position is a great introduction to asset management and a worthwhile apprenticeship to pursue.

Uppers	Downers
• Broad exposure to various industries • Reasonable working hours • Direct exposure to the portfolio managers	• No expertise in a single industry • Less formal training process • Some operations work • Repetitive assignments

Investment Research

CHAPTER 8

The investment research segment is responsible for generating recommendations to portfolio managers on companies and industries that they follow. Similar to the portfolio management segment, there are several positions in the research hierarchy: senior research analyst, research associate-analyst (or junior analyst), and research associate.

On the Sell-side, senior analysts typically have three to five years of post-MBA research experience or six to 10 years of post-college experience (if an MBA was not pursued). On the Buy-side, new MBA graduates typically occupy the senior analyst position. The research associate-analyst is typically a Sell-side position for recent MBA graduates. These positions are usually occupied for several years or until the candidate is deemed capable of covering his own sector. Both Buy-side and Sell-side firms employ recent college graduates as research associates. It is typically a two- or three-year program that can lead to a more senior position or result in the associate returning to business school.

Senior Research Analyst

Senior research analysts are investment experts in their given industry focus. An equity analyst covers stocks; a fixed income analyst covers bonds.

Job responsibilities

Their role is to predict the investment potential of the companies in their sector. For instance, take an equity analyst covering computer hardware companies, including Apple Computer. The analyst would be responsible for predicting Apple's future earnings and cash flow, and comparing the fair value of Apple to the expectations of the stock market. To do this, the analyst would build a financial model that included all of the potential variables to derive Apple's earnings and appropriate value (e.g., sales growth, business costs, as well as research and development).

A fixed income analyst focusing on telecom, for example, might be looking at a new high-yield corporate bond issued by Qwest. The main thing the analyst will be looking for is Qwest's ability to pay off that loan—the amount of the bond. The analyst will look at historical cash flows, project future cash flows and look at other debt obligations that might be more senior to the new bond. This will tell the analyst the likelihood that Qwest will be able to pay off the bond.

Analysts spend a considerable amount of time attending industry conferences, meeting with company management and analyzing industry supply and demand trends to derive business forecasts. Sell-side analysts follow around 15 to 25 companies and must be an expert on each while Buy-side analysts typically follow even more companies.

Teamwork

An important part of a senior research analyst's job is to convey their recommendations to the portfolio management teams. Therefore, senior analysts spend considerable time presenting to portfolio managers and issuing investment reports. Because of this, senior research analysts must be articulate and persuasive in their convictions in order to earn respect within the firm.

Education and experience

Senior research analysts typically have served as investment research associates for three to five years, post MBA or CFA, before assuming their position. If successful in their role, many senior analysts move into portfolio management roles later in their careers.

Investment Research Associate-Analyst

This is the role for most MBAs or those with equivalent experience. It is typically a Sell-side position but some larger Buy-side firms employ the position as well. Essentially, associate-analysts have the same responsibilities as senior research analysts with one exception: associate-analysts are given smaller industries to follow. Typically for the Buy-side, the industry assigned to an associate-analyst is a component of a broader sector that is already being analyzed by a senior analyst. For instance, an associate-analyst might be assigned HMOs and work closely with the senior analyst in charge of insurance companies. As stated above, the more likely scenario is for the MBA to enter the Buy-side as the senior analyst. On the Sell-side, the associate-analyst will typically work under the senior analyst for several years before branching off on his own to cover a subsector.

The associate-analyst creates investment recommendations in the same manner as a senior analyst. In general, they spend several weeks familiarizing themselves with their industry by reading industry papers, journals and textbooks, and attending industry conferences. A large percentage of a research analyst's time is spent monitoring industry and company trends to predict financial results for the company. Therefore, associate-analysts are constantly speaking with management, customers and suppliers to gauge the current status of the company they are analyzing. Armed with financial models and fundamental company analysis, they develop investment recommendations that they distribute to the senior analyst or firm's portfolio managers (on the Buy-side).

Challenges and skills

One of the greatest challenges for a new associate-analyst is the steepness of the learning curve. Senior analysts and portfolio managers do not have the patience or the luxury to allow an analyst to be uninformed or consistently incorrect. New associate-analysts work extremely hard building trust with their superiors.

Obviously, financial acumen and quantitative skills are a must for an associate-analyst, but communication skills are also critical. Associate-analysts need to be able to clearly and persuasively communicate their investment recommendations. They must also be able to respond to detailed inquiries from portfolio managers that challenge their ideas—which requires a strong tact and a great deal of patience. Furthermore, associate-analysts need to be energetic, diligent and intellectually curious.

Uppers	Downers
• Autonomy and creative independence • High level of responsibility • Pays well • Typically a collegial environment	• Long hours (60+ hours per week) • Steep learning curve • Always being graded (on your recommendations) • Difficult to earn respect from portfolio managers

Investment Research Associate

Investment research associates work with senior research analysts (or in some cases, associate-analysts) to help in developing investment recommendations for portfolio managers. Recent college graduates will spend, on average, two or three years in this role before returning to business school. However, some of the most successful associates are often promoted directly to associate-analyst (most of these fast-trackers will have completed their CFA while working as an associate).

Job responsibilities

The investment research associate is responsible for helping to monitor the industry and changes within companies covered in the industry, and to update financial models accordingly. Associates collect data for industry data services, company conference calls and surveys. For instance, in the previous Apple Computer example, the associate would be collecting data about consumer demand and input prices for semiconductors. Additionally, the associate provides support to the senior analyst in the construction of recommendation reports sent out to the portfolio managers. Specifically, the associate updates charts and modifies numerical sections of the report.

While some of the work is routine and the hours are long, associates are sitting next to, and learning from, the intellectual capital of the firm. If you work for a good analyst he or she will teach you the ropes, including the intangibles behind analyzing companies, financial valuation and industry knowledge.

The role of investment research associate requires a high level of quantitative knowledge. Primarily, a basic working knowledge of accounting, financial markets, financial analysis and statistics is needed for this position. Aside from a strong quantitative background, research associates need to be detail-oriented, analytical problem-solvers, diligent and superior communicators. Generally, firms are looking for finance or accounting majors for these jobs, but engineers and science majors are also coveted for technology and health care-related industries.

Uppers	Downers
• Great quantitative experience • Most portfolio managers were once in research • Gain industry expertise • Pays well • Typically a collegial environment • Top performers are promoted without going to business school	• Long hours (60+ hours per week) • Could be a lonely work environment with lots of time in front of the computer • Repetitive assignments • Significant data work

Alternative Entry Points

Don't give up if one of the positions discussed above isn't available for you—these are difficult jobs to get. If you are having no luck getting positions with portfolio management or investment research teams, there are many other alternatives to pursue that will better position you to reapply with only a year or two of additional experience. Below are descriptions of some of the best options to consider.

Account and product management associates

Because sales and marketing professionals are typically required to be fluent in all of the investment products, these positions create a great opportunity to learn about the various investment styles that clients demand. This area is also a great career opportunity for those interested in asset management but don't want to be the investment decision maker (more about this later). If your goal is to use sales and marketing as a stepping stone to the investment side, make a point to network early on with investment professionals, prove yourself at your current job before making it be known that you want to make the switch, and work toward developing the quantitative skills needed for the investment positions.

Buy-side trading and operations

As we suggested in the previous section, many smaller firms integrate trade reconciliation and reporting with the portfolio manager analyst or assistant position. However, at the larger firms they typically have extensive back-office operation teams. These trading and operations personnel process the investment trades done by portfolio managers. In general, the positions include mutual fund accounting, trade confirmation, trade reconciliation and report processing. The job really does not prepare you directly for the investment side of the business, but it does afford you the opportunity to get to know people in the business and build goodwill with the asset management firm. Moving from the operations side to the investment side of the firm is challenging (therefore, this is only a suggested option for recent college graduates with limited experience). To improve your chances, we would suggest considering firms that encourage this type of maturation process and integrate operations into the investment business—many firms create a clear separation.

Sell-side investment research

Many Buy-side investment professionals come from the Sell-side. It is a great place to learn to do analysis, generate financial models and construct investment reports. The quantitative skills and knowledge of the overall investment business makes former Sell-side people desirable to asset management firms.

Investment consulting

These are the firms that advise institutions, high-net-worth investors and 401(k) plans on appropriate diversification strategies and which asset managers to hire. At the entry level, you will assist on manager searches and data collection for multiple investment styles. It is a good introduction to the different firms and the dynamics of the industry as a whole.

Take the CFA (chartered financial analyst) exam

This is a three-part exam that tests your knowledge in financial accounting, statistics, investment analysis, economics and ethics, among other subjects. The exam is offered in December and June for Level I and in June for Levels II and III. The CFA is becoming a standard for the industry and many people begin the process prior to even entering the industry. It is not a prerequisite to getting an investment job, but working towards achieving it can certainly give you a leg up on your peers, especially pre-MBA candidates, as it shows commitment and dedication to a career in the investment industry.

Marketing and Sales

CHAPTER 9

Increasingly, as the industry grows and matures, investment management companies are focusing more on professional marketing and sales as a point of differentiation—especially on the institutional side of the business. Traditionally, marketing and sales were more or less an afterthought, and a lot of the marketing and sales work was performed by investment professionals. As the industry has grown, a new breed of investment professional has been borne to actively pursue these roles: they are known as account managers and product managers and they serve the sales and marketing functions in investment management firms. Below is a broad description of the positions that exist in the institutional marketing and sales segment.

Account and Product Manager

Job responsibilities

Account and product managers are responsible for identifying new clients, presenting the firm's investment capabilities to new and existing clients, solidifying new relationships, servicing existing clients, and acting as the liaison between the product and the client. As was previously discussed, institutional clients are demanding. Portfolio managers used to serve many of these roles. However, clients became more sophisticated and demanding, and often turn to investment consultants to conduct significant due diligence. In order to keep portfolio managers focused on picking stocks and bonds, the advent for roles to meet these client needs has risen.

The search process for being selected to manage an institution's assets is rigorous and lengthy—it could take up to several years. Asset managers make several presentations, and institutions conduct extensive due diligence. Once an investment management firm is hired, the account and product managers serve in a client relationship capacity. In this role, they arrange semiannual portfolio reviews, prepare presentations and assure that the proper reporting procedures are followed. Furthermore, managers work to broaden client relationships by introducing institutions to additional investment products offered by the firm. To do this, account managers must be constantly aware of their clients' needs. They do this by reading current news about their clients and meeting with them on a regular basis. Additionally, product managers educate themselves on the various products that clients might be interested in. This is where the product managers come in: After account managers identify a client's product need, product managers will determine how best to present the product to the client. They typically have a greater depth of knowledge of the product's strategy, performance and holdings than account managers and can articulate this to the client.

Education and experience

Account and product managers are MBA graduates or those with equivalent experience. Increasingly, many of these managers are acquiring CFA degrees as client sophistication has increased.

Product Management Associate

Product management associates assist in creating portfolio review presentations and in developing promotional presentations for potential new clients. They analyze the current market, focusing on investor demand and trends. They often analyze competing products and develop marketing tools to promote and differentiate their particular product. Product managers are traditionally segmented by investment product type such as equity or fixed income. Some product managers focus on only one specific product type such as a large-cap equity portfolio or short-duration bond portfolio.

Where do they fit in?

Product management associates are typically recent MBA graduates. They often work with recent college graduates who serve as analysts on the product management team.

Account Management Associate

Account management associates assist in answering RFPs (request for proposals) issued by institutions seeking to hire new investment managers. Additionally, associates assist senior client servicing officials in maintaining and expanding client relationships. Account management associates are traditionally segmented by client type—public pension funds, corporate pension funds, endowments and foundations.

Account management associates are typically recent MBA graduates. They often work with recent college graduates who serve as analysts on the account management team.

Uppers	Downners
• Broad knowledge of all of the investment products in the marketplace • Great professional atmosphere for people that like the industry, but don't want to be the investment decision maker • Less hierarchical career path than the investment side • More entry-level jobs than the investment side • Lots of client interaction	• Difficult to jump to the investment side • Limited focus on building quantitative skills • Repetitive assignments

Days in the Life

CHAPTER 10

In this chapter, we take a look at some "typical" days in the life of investment management professionals we spoke with.

Senior Analyst, Major Mutual Fund Firm

7:00 a.m.: Arrive in the office.

7:01 a.m.: Read *The Wall Street Journal* and *Financial Times*, paying particular attention to articles about the industry I follow.

7:30 a.m.: Listen to morning call voicemails from Sell-side analysts. ("Each Sell-side firm has a morning meeting, and the highlights are sent via the institutional sales person to their asset management clients.")

8:00 a.m.: Attend the morning investment meeting. ("Most firms have a daily meeting where all analyst and portfolio managers gather to relay new information, initiate stock recommendations and discuss current market changes.")

9:00 a.m.: Listen to a company's investment conference call ("particularly during earnings reposting season. These calls usually include updates from the CEO and CFO on operating performance, strategic initiatives and future company expectations.")

9:45 a.m.: Open the stack of reports in my in-box. Study the latest industry press and investment literature to identify new trends that may impact the companies I follow.

10:30 a.m.: Phone industry analysts and company management with follow-up questions.

11:00 a.m.: Meet with my research associate to discuss potential changes that need to be made to financial models and investment recommendations based on new information gathered during the morning's activities

12:00 p.m.: Eat lunch while attending an industry conference or a meeting with Sell-side analysts. ("These are great ways to gather new insights and meet with industry players in a less formal setting.")

1:30 p.m.: Continue working on the written investment analysis of the company I am going to initiate coverage on the next day. ("This is the culmination of a two-week process in which I met with management of the company, visited the two largest manufacturing facilities, spoke with large customers of the company and conducted surveys on the demand expectations of their new product line.")

2:45 p.m.: Take a phone call from a senior portfolio manager who wants to discuss in more detail the investment report I issued last week on XYZ Company. ("Specifically, he wants additional support for why I believe earnings will fall 12 percent when the company has stated they expect only a 6 to 8 percent decline.")

3:15 p.m.: Sit down to write the final recommendation summary for the company I will initiate coverage on the next morning.

4:00 p.m.: Review the day's trading activity to see how my industry performed, again paying particular attention to the company that is being initiated on. ("If the investment team likes the idea, they will be paying close attention to the recent trading performance of the stock.")

4:30 p.m.: Meet with my research associate to put the finishing touches on the PowerPoint presentation that I will use to pitch the new stock the following morning. ("I identify a few changes to the slides and decide to cut out a few pages: I remember that portfolio managers do not want to be inundated with information; they only want the necessary facts and the pertinent details that support my recommendation.")

5:30 p.m.: Check the newswires and first-call notes for any after-hours company news.

6:00 p.m.: Head to the gym ("for a quick workout to clear my head. Hopefully there is a workout facility in the building.")

7:00 p.m.: Return to the office to run through the final power point slides and to make sure the initiation report is on the top of each portfolio managers' in- box.

7:45 p.m.: Leave for home.

Senior Analyst, Hedge Fund

5:45 a.m.: Wake up and check BlackBerry for any news

6:00 a.m.: Check foreign markets on CNBC from home before I leave for work. (Foreign stock markets and the futures market are a good proxy of how the U.S. markets will open.)

6:30 a.m.: Arrive at work. Monitor foreign positions and comb through email, checking for any upgrades or downgrades from Sell-side analysts.

7:00 a.m.: Attend morning meeting with the other five members of our portfolio team. We discuss two positions. Company XYZ has doubled in three months and now represents a significant concentration of the portfolio. We decide to trim our position. The other stock has underperformed significantly. Our investment thesis remains intact and we decide to schedule a call with Company XYZ's CFO for later in the day.

8:00 a.m.: Receive phone call from a Sell-side analyst that downgraded a stock I have a large position in. He explains his reasoning for the downgrade. I expect the stock to drop significantly and may use the opportunity to purchase more stock.

8:30 a.m.: Read the Sell-side analyst's downgrade report. Revisit my financial model and assumptions. I disagree with certain key conclusions and check the pre-market trading activity. It appears the stock is down 12 percent.

9:00 a.m.: Notify the portfolio manager that I want to purchase more of the stock. He approves the decision.

9:30 a.m.: The market opens and the stock is down 15 percent. I contact our trader and let him know I want to purchase an additional 100,000 shares.

9:35 a.m.: The trader calls me and confirms he was able to find 100,000 shares and made the purchase.

9:45 a.m.: Meet with a colleague on the options desk for coffee. As an analyst covering three industries, I brief him on my industry outlooks. He is trying to devise an options strategy to capitalize on the volatility of one of my industries. I assist by notifying him of upcoming catalysts that will increase volatility in the industry.

11:00 a.m.: Meet with the portfolio manager to further discuss Company XYZ and why the stock is underperforming. He asks extremely detailed questions on the company's inventory levels. I answer most of the questions but need to get back to him on others.

11:30 a.m.: Call up several distributors of the company to discuss inventory levels. Determine that inventory remains at all-time low levels. Write the portfolio manager a quick email.

1:00 p.m.: Eat lunch with a sales representative from JP Morgan. The purpose of the lunch is to introduce me to a new Sell-side analyst the firm has hired and to hear his investment ideas.

2:00 p.m.: Prepare for the conference call with Company XYZ's CFO. Write down five topics I plan on discussing with him.

2:30 p.m.: Conference call with CFO of company XYZ.

3:30 p.m.: Discuss the call with the portfolio manager. We agree to hold onto the position.

4:00 p.m.: Go through email and return phone calls.

6:00 p.m.: Prepare for earnings releases of three companies for the next day.

7:00 p.m.: Go home.

Research Associate, Major Sell-side Firm

"We don't sit in the corner and just crank out spread sheets. That misperception about research bothers me. Our job is to offer our perspective on stocks to institutional clients. You must have strong verbal and written communication skills. Through morning calls and phone calls we have to communicate our perspective to institutional clients. Sales people and traders understand our business better than investment bankers. Although equity analysts have come under fire—overall, research analysts are today are in a much different position than before."

—Citigroup investment research associate

7:00 a.m.: Arrive at work.

7:01 a.m.: Quickly check email and any news releases.

7:15 a.m.: Prepare for morning sales meetings. The senior analyst will be presenting the latest upgrade and it is imperative to have any backup data or information memorized or readily available for questions.

7:30 a.m.: Attend morning meeting. Ten senior analysts present their investment ideas to the sales force.

8:00 a.m.: Morning meeting concludes. A senior equity sales representative asks me to prepare a financial analysis demonstrating the EPS accretion if a particular company wins a large upcoming contract.

8:30 a.m.: Walk down to trading floor and present the sales representative with the financial analysis. Wait by his side as he calls a new hedge fund client to discuss the upgrade. The hedge fund client seems interested and wants to talk to the senior analyst later that day.

9:00 a.m.: Check voicemail; return phone calls.

9:30 a.m.: Stock market opens.

10:00 a.m.: Meet with senior analyst to discuss the day's objective. It may be the only communication I have with the senior analyst all day.

10:30 a.m.: Work on the financial model for a company we will be initiating coverage on.

1:00 p.m.: Eat lunch at my desk.

1:30 p.m.: The sales representative from this morning calls with the new hedge fund client wanting to talk about the stock that was upgraded. The call is transferred to the senior analyst and I listen in on the conversation.

2:30 p.m.: Call investor relations of a company to discuss a news release that was recently put out. The company is retiring $1 billion of debt and I need to determine what type of charges will be incurred.

3:30 p.m.: Continue working on financial model and begin to write initiation report.

5:30 p.m.: Quickly touch base with senior analyst before he leaves. Determine if there are any deliverables for the next morning.

6:30 p.m.: Leave for the day.

Portfolio Manager, Major Mutual Fund Firm

6:30 a.m.: Take train into office. Read *The Wall Street Journal* and several trade magazines. An article in an aviation magazine mentions a small aerospace firm that designs generic aftermarket parts. It sounds like an interesting company. I send the portfolio analyst a quick e-mail to gather additional information.

7:00 a.m.: Arrive at work. I have 100 e-mails sitting in my inbox. I quickly sift through the emails, paying particular attention to companies that have released quarterly earnings. Three companies whose stocks I own in the portfolio have reported earnings.

7:30 a.m.: The portfolio analyst comes into my office with preliminary research on the aerospace company. He has printed out several Sell-side reports and a financial model. He tells me the company is growing the top line at 20 percent and generating positive free cash flow. I ask him if it will generate increasing returns on invested capital, which he tells me he expects it to. The company seems very interesting and meets our portfolio's initial screening process, so I ask the portfolio analyst to continue researching and build out a detailed financial model.

8:00 a.m.: Review my calendar with my assistant. She notifies me that CEOs from four companies will be visiting the offices today. I ask to be signed up for two of the meetings.

8:30 a.m.: Attend the morning investment meeting. A new senior analyst covering pharmaceuticals has joined the firm and is initiating coverage on the industry. He puts hold ratings on two stocks in my portfolio. I ask several questions during his presentation. He agrees to follow up with me later in the day.

9:00 a.m.: Dial-in to earnings conference call. I'll try to listen to as much of it as possible but realize I will probably be interrupted.

9:30 a.m.: My co-portfolio manager walks into my office. While we each manage 50 percent of the portfolio independently, we constantly inform each other of our ideas and trades. We discuss the week's upcoming economic releases and how our portfolio is structured to react to certain data points.

10:30 a.m.: I attend a meeting with a CEO on his company's road show. A "road show" occurs when a company files an initial public offering (IPO) and seeks to sell the equity to institutional investors. While I find the company and presentation to be interesting, I am going to pass on investing in the IPO.

11:30 a.m.: Return to my office. I have five new voicemails and 20 new e-mails. One message is from the product manager of the fund I manage. He is getting several inquiries from account managers over the quarterly performance of my portfolio. We set up a time to meet later in the day.

12:00 p.m.: Eat lunch while attending an industry update. The technology analyst is providing an annual update and outlook to our firm's portfolio managers. Our firm provides lunch while the analyst formally presents his research and projections.

1:00 p.m.: Monitor portfolio. Check to see if any stocks have particularly large gains or losses. There are currently no abnormal returns.

1:30 p.m.: Attend another meeting with the CEO of a restaurant company. CEOs and CFOs often go on the road several times a year to meet with institutional investors. I have owned this particular stock at several points throughout the last five years and know the CEO quite well. The meeting is quite casual and we discuss the outlook for his business amidst a potential pending recession.

2:30 p.m.: Contact trader. Make several trades in order to meet new fund flows.

3:00 p.m.: Meet with the pharmaceuticals industry analyst to gain further understanding behind his investment theses on the two stocks I hold in my portfolio.

4:00 p.m.: Meet with the product manager for my fund. While our performance has been decent in the last quarter, it fared much better than some of its closest competitors. The product manager wants a detailed understanding of the "moving parts." He conveys this information to several account managers whose clients have large positions in the fund.

5:00 p.m.: Touch base with the portfolio analyst and see if he has gotten any further work done on the aerospace company from this morning. He has set up a conference call with a Sell-side analyst the next day to discuss the company.

5:30 p.m.: Leave for home.

CAREER GUIDE

APPENDIX

INVESTMENT MANAGEMENT

Glossary

Active investor: Uses available information and forecasting techniques to seek a better performance than a portfolio that is simply diversified broadly.

Asset: Economic resources owned by a firm that are likely to produce future economic benefits and are measureable with a reasonable degree of certainty. Examples include cash, accounts receivable and inventory.

Balance Sheet: States the firm's assets and how they are financed. Includes sections on assets, liabilities, and shareholder's equity.

Buy-side: The asset management firms that represent individuals and institutional investors.

Capital expenditures: Expenditure to acquire long-term assets.

CFA exam: A three-part exam that tests your knowledge in financial accounting, statistics, investment analysis, economic, ethics, etc. The exam is offered in the late spring (and winter for Level I) and is taken over the course of three years.

Cost of capital: Opportunity cost of funds invested in a business; the rate of return that rational owners require an asset to earn before they will devote that asset to a particular purpose. Analysts often measure the cost of capital by taking a weighted average of a firm's debt and various equity securities.

Depreciation: The reduction in the book or market value of an asset. It is also the portion of an investment that can be deducted from taxable income. For example, a piece of equipment's value is depreciated each year as its useful life declines.

Ding: Not getting the job. The call you get after the interview that says, "thank you, but…"

Dividend: Payment by a company to its stockholders.

ERISA: Employee Retirement Income Security Act of 1974. The federal law that sets most pension plan requirements.

401(k) plans: The internal revenue code section that established the requirements for employee defined contribution plans. Houses a substantial portion of employee retirement savings.

Growth stock: Characterized as industry leaders that investors believe will continue to prosper and exceed expectations. These companies have above-average revenue and earnings growth and their stocks trade at high price to earnings and price to book ratios. Technology and telecommunications companies, such as Microsoft and Cisco, are good examples of traditional growth stocks.

Income Statement: Describes the company's operating performance over a period of time.

Initial Public Offering (IPO): A company's first public issue of common stock.

Liability: Economic obligations of a firm arising from benefits received in the past that are required to be met with a reasonable degree of certainty and within a reasonably well-defined period of time. Examples include accounts payable and salaries payable.

Market capitalization: A company's value assigned by the stock market. It is the product of the current stock price and the shares outstanding in the market. Investment products are often classified by the level of market capitalization that they invest in (i.e., large-capitalization funds typically only buy stocks with greater than $1.5 billion in market capitalization).

Mutual fund: Managed investment fund whose shares are sold to investors.

Mutual fund "supermarkets": Made popular by Charles Schwab. It is a common distribution source that offers hundreds of different mutual fund products to individual investors.

Passive investor: Relies on diversification to match the performance of some stock market index. Because a passive portfolio strategy involves matching some stock market index, this strategy is commonly referred to as indexing.

Present value: Discounted value of future cash flows.

Request for proposal (RFP): Statement issued by institutions (i.e., pension funds or corporate retirement plans) when they are looking to hire a new investment manager. Typically details the style of money management required and the types of credentials needed.

Sell-side: The functions of an investment bank. Includes investment bankers, traders and research analysts. These sell-side professionals issue, recommend, trade, and "sell" securities to the investors on the "buy-side."

Shareholder's equity: The difference between a firm's net assets and its liabilities.

Specialty firms: Firms that focus on one type of investment management style, product, or client type.

Statement of Cash Flows: Summarizes the cash movement of a company over a period of time.

Value stock: Characterized as relatively well-established, high dividend paying companies with low price to earnings and price-to-book ratios. Essentially, they are "diamonds in the rough," that typically have undervalued assets and earnings potential. Classic value stocks include pharmaceutical companies like Pfizer and banks such as JPMorgan Chase.

Valuing a Company

Below, we'll take a look at the most common ways of assigning a market value to a company, also called valuation techniques.

Ratio Analysis

Equity analysts commonly use financial ratios as a way to value the stock of a company. Specifically, they use ratios to analyze a company's past and present performance and predict future financial results. Generally, ratios are evaluated as a time series over the last few years, as a comparison against other industry competitors or as a comparison against benchmarks. Ratios are derived from line items on a company's financial statements (balance sheet, income statement and statement of cash flows). Below are some common valuation measures used in evaluating companies in multiple industries.

Price Multiples	
Price to Earnings	**Current stock price/Earnings per share**
Price to Book	**Current stock price/[assets—liabilities]**
Price to Sales	**Current stock price/Sales revenue**
Price to Cash Flow	**Current stock price/operating cash flow**

Profitability Ratios	
Return on Sales	**Net Income/Sales**
Gross Margins	**[Sales—Cost of Goods Sold]/Sales**
Return on Assets (ROA)	**[Net Income—After tax interest expense]/ Average of the last two years' assets**
Return on Equity (ROE)	**Net income/Average of the last two years' total shareholders' equity**

Balance Sheet Ratios	
Asset Turnover	**Sales/Average of the last two years' assets**
Accounts Receivable (AR) Turnover	**Sales/Average of the last two years' AR**
Inventory Turnover	**Cost of goods sold/Average of the last two years' inventory**
Accounts Payable Turnover	**This year's inventory purchases/Average of the last two years' accounts payable**

Solvency Ratios	
Debt to Capital	**Total debt/Total Capital (total debt + preferred + equity)**
Debt to Equity	**Total debt/Total shareholders' equity**

Discounted Cash Flow (DCF) Analysis

The DCF analysis has many variations, but it is simply a valuation exercise of projecting the cash flows of the company into the future (typically five to seven years) and then discounting them to the present value using the company's WACC. This type of analysis is commonly taught in business schools and academic texts, but is not broadly used in industry. Many proponents argue that predicting a terminal cash flow value and an appropriate discount rate are highly subjective and exposed to vast error. However, the concepts of a DCF analysis are often used in some form to evaluate investments. Below is a simplified approach to doing a discounted free cash flow analysis. Keep in mind this is a general outline and does not include many of the more detailed nuances of the analysis.

Step 1

Calculate free cash flow for five to seven years in the future. Analysis is based on the financial projections made on the pro forma (predicted) balance sheet and income statement.

Calculating free cash flow

Net income
+ Depreciation and amortization expenses
+ Year-over-year changes in deferred taxes
- Year-over year change in net working capital (current assets - current liabilities)
= Cash flow from operations
- Capital expenditures
= Free cash flow

Step 2

Determine the terminal value of free cash flows of the company when projections become too distant in the future to predict. In essence, you are assigning a constant growth rate for the company beyond the years that you can reasonable predict (typically five to seven years).

Terminal Value = last year of projected free cash flows * (1+growth rate)

[*The growth rate is usually based on the rate of inflation*].

Step 3

Discount each year's projected cash flow and the terminal value to the present time using the company's WACC (the weighted average of the company's cost of debt and the cost of equity).

Example of discounting five years of free cash flows

Year 1 Projected free cash flow/(1 + WACC)
+ Year 2 Projected free cash flow/(1 + WACC)^2
+ Year 3 Projected free cash flow/(1 + WACC)^3
+ Year 4 Projected free cash flow/(1 + WACC)^4
+ Year 5 Projected free cash flow/(1 + WACC)^5
+ Terminal value/(1+WACC)^5
= Total present discounted cash flow value

Step 4

The discounted cash flow value is often referred to as the intrinsic value of the company. Analysts compare this intrinsic value to the stock market value of the company to determine whether the stock is over or under valued.

If, Intrinsic Value > Stock Market Value, then the stock is under valued (buy)
If, Intrinsic Value < Stock Market Value, then the stock is over valued (sell)

(For greater detail on valuation including more formulas, sample questions, and examples of the DCF analysis, see the *Vault Guide to the Finance Interviews*, the *Vault Guide to Advanced and Quantitative Finance Interviews*, and the *Vault Finance Interview Workbook*.)

About the Author

Adam Epstein: Adam Epstein began his career in investment management as a sell-side equity analyst with a major New York City investment bank. In this role, he was responsible for generating buy and sell recommendations, publishing research reports, and communicating investment ideas with buy-side clients. He most recently worked in Boston as a buy-side equity analyst for one of the world's largest asset management firms. As an industry analyst, he was responsible for generating both long and short investment ideas to portfolio managers. Mr. Epstein is a graduate of the University of Michigan (BA), University of California, Santa Barbara (MA), and UCLA Anderson School of Management (MBA).